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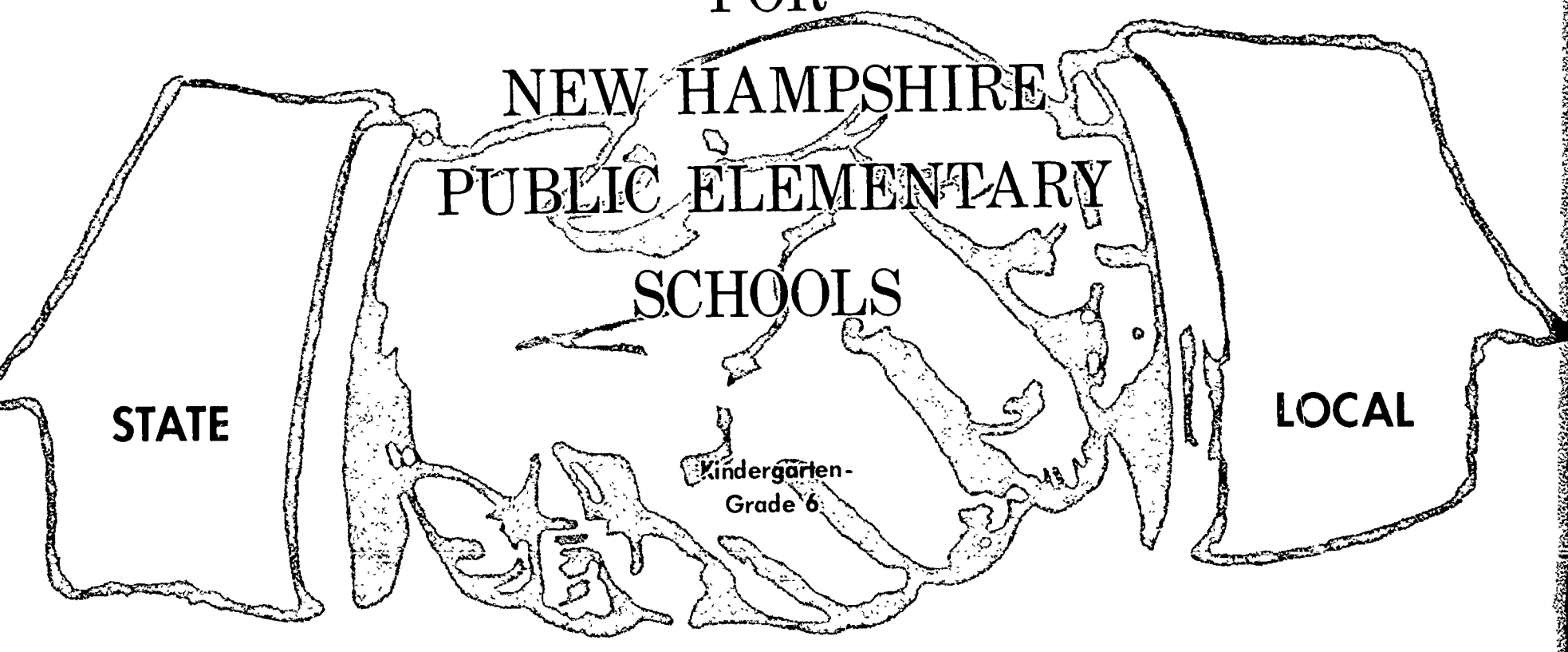
ABSTRACT

SECTIONS CONCERNED WITH FACILITIES DEAL WITH LIBRARY SERVICES, EQUIPMENT AND FACILITIES FOR SCIENCE AND PHYSICAL EDUCATION, AND THE SCHOOL BUILDING. RECOMMENDATIONS FOR LIBRARY SERVICE INCLUDE CHECK LISTS AND STANDARDS PERTAINING TO OBJECTIVES, BASIC EQUIPMENT AND SUPPLIES, INDIVIDUAL CLASSROOM COLLECTIONS, AUDIO VISUAL COLLECTIONS, LIBRARY QUARTERS, AND EXPENDITURE LEVELS FOR A STARTING LIBRARY. GUIDELINES FOR THE SCHOOL BUILDING ARE DESIGNED TO MAKE IT ADJUSTABLE TO FUTURE CHANGES IN CURRICULUM AND TEACHING METHODS, EXPANDABLE TO ACCOMMODATE ENROLLMENT CHANGES WHILE ADHERING TO THE ORIGINAL DESIGN AND FUNCTIONAL AREAS, DURABLE WITH LOW MAINTENANCE COSTS, AND EASILY ACCESSIBLE. CRITERIA ARE SUGGESTED FOR SITES, HEALTH AND SAFETY FACTORS, REGULAR CLASSROOMS, KINDERGARTEN ROOMS, ADMINISTRATIVE SUITES, MULTI-PURPOSE ROOMS, AND CAFETERIA AND KITCHEN AREAS. EQUIPMENT AND FACILITIES STANDARDS FOR PHYSICAL EDUCATION ARE SUGGESTED IN BOTH ESSENTIAL AND IDEAL CATEGORIES. A FLOOR PLAN AND A LIST OF EQUIPMENT ARE SUGGESTED FOR A SCIENCE PROGRAM. (FPC)

A PARTNERSHIP FOR GOOD EDUCATION

GUIDELINES AND RECOMMENDATIONS FOR NEW HAMPSHIRE PUBLIC ELEMENTARY SCHOOLS



WORKING TOGETHER

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DEPARTMENT OF EDUCATION
1966

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Reprint 1967

PREFACE

The New Hampshire State Department of Education is responsible for the continued improvement of education for all children. Good leadership, planning and organization is necessary if we are to meet the new challenges in schools today. The needs of education for all children can be better understood and supported when the State Department of Education, educators, citizens and local school districts join together in a partnership to find sound viewpoints for improvement of the educational opportunities for all children.

This report is very significant and timely, and should be of valuable use to all those responsible for improving the learning and education of boys and girls.

PAUL E. FARNUM
Commissioner of Education

FOREWORD

Guidelines for New Hampshire Public Elementary Schools represents both a timely and significant development for our State's system of public elementary education. To school administrators, teachers, and interested citizens it suggests a positive approach in the continuous search for ways to improve New Hampshire's elementary schools. The suggestions it contains have evolved from the discussions and dedicated work of a volunteer group of people who represent the profession and the public. A special note of recognition is due those who served as members of the Committee and gave freely of their time in contributing to this project.

The contents of this publication reflect two important underlying assumptions which date back to the establishment of an Elementary Education Advisory Committee in 1961. The first assumption is the recognition that essential elements pertaining to philosophy, organization, program, staff and facilities may be identified in every elementary school. The second assumption is the recognition that self-evaluation and study by an elementary school tends to define those areas which need improvement. In perspective, these assumptions are rather basic, yet they recognize the diversity that exists among New Hampshire communities and New Hampshire elementary schools.

It is our hope that this edition of *Guidelines and Recommendations for New Hampshire Public Elementary Schools* will stimulate interest and discussion toward the end of providing good elementary schools in every New Hampshire community.

FRANK W. BROWN, *Chief*
Division of Instruction

TABLE OF CONTENTS

INTRODUCTION

GUIDELINES FOR NEW HAMPSHIRE PUBLIC ELEMENTARY SCHOOLS

A review of the committee report on *Guidelines and Recommendations for New Hampshire Public Elementary Schools* indicates some very encouraging and sound educational viewpoints. This report provides information on the following: (1) background of project; (2) purpose of the project; (3) goals of the project; (4) how guidelines can be used; (5) and some guidelines for elementary schools.

These guidelines are an initial step toward more specific viewpoints for further examination by educators and citizens interested in self-evaluation and quality education.

Some Background Information

An Advisory Committee on Educational Information was formed on October 11, 1960, to consider and suggest the types of educational information the State Department of Education should supply to the various professional, lay-educational, and non-educational groups in New Hampshire. This committee was composed of nineteen individuals whose major task was to develop an educational information program designed to improve the education of each child in the State. This group was also charged with the responsibility of suggesting changes in the present educational information program of the State Department of Education.

The State Department of Education invited approximately 100 persons of many lay and professional State organizations to participate in the October 26, 1960, Conference on Educational Information. The purpose of this Conference was to get an indication of need and interest regarding educational information from representatives of both school and non-school organizations in New Hampshire.

On March 13, 1961, the New Hampshire State Board of Education formally approved the establishment of an Elementary Education Advisory Committee.

This Committee cooperatively developed an elementary report, Form BE-1 and published in 1962, *A Study of Elementary Education in New Hampshire* This report is currently used as background information by the present committee on Guidelines for New Hampshire Public Elementary Schools.

The Committee on Guidelines for New Hampshire Public Elementary Schools was appointed and met on May 2, 1963, to assist the Division of Instruction in the identification of guidelines and recommendations regarding organization, programming, and staff practices for public elementary schools. This Committee of 58 met in sub-committee sessions during the 1963-64 school year with their respective chairmen.

During the 1964-65 school year, 350 working copies of the report were distributed in twelve area conferences throughout the State. Superintendents, school board members, administrators and classroom teachers met to discuss the report and to "feed back" written recommendations to the writing committee for improvement of the working draft. More than 350 persons participated in the making of this final report, and the development of these guidelines. We wish to acknowledge their significant contribution to such an important project.

Purpose of Project

The purpose of this project is to develop and identify sound educational points of view that can serve as a model to help guide those responsible for the education of all boys and girls in New Hampshire public elementary schools.

Goals of Project

To encourage:

- All public elementary schools to develop a written statement of philosophy.
- All schools to develop an organizational pattern that best meets the needs of all children.

- Sound administration and supervision in the elementary school.
- A broad well-balanced elementary school curriculum.
- Well-qualified and sufficient teaching personnel to adequately meet the needs of all the children.
- Sound in-service education programs for all teachers.
- Good library facilities and practices in all public elementary schools.
- Good guidance practices in all public elementary schools.
- Good modern elementary school facilities and building practices for tomorrow's schools.

Uses of Guidelines

- To inform the public about sound programs in elementary education in New Hampshire.
- To familiarize local school boards with the educational viewpoints regarding the organization, programming, and staffing practices of public elementary schools.
- To provide superintendents, assistant superintendents, and teacher consultants with information that can help guide them toward an improved program and better education for all children.
- To encourage elementary school administrators and teachers to initiate self-evaluation and become more cognizant of sound educational practices.
- To serve as a basis for further study of elementary education by the New Hampshire State Department of Education.

JOHN G. ECONOMOPOULOS
Project Chairman

MEMBERS OF THE ADVISORY COMMITTEE ON ELEMENTARY EDUCATION (1961 - 1966)

This Advisory Committee on Elementary Education was asked to advise the Department of Education on two major activities, namely:

1. The further development of statistical information, to be reported on a periodic basis, on the condition and progress of elementary education in New Hampshire.
2. The continuous development of priority guidelines for elementary schools in New Hampshire.

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**Chairmen*

Grateful acknowledgement is made to this important advisory committee for their willingness to participate in this useful and worthwhile publication. Also, we extend our appreciation to the committee for the cooperation they extended to the State Department of Education. Their interest and guidance in the project helped the Department to culminate a very important viewpoint regarding elementary education in New Hampshire. Our gratitude is also extended to Carlton Sterling, Graduate Student; Mrs. Carmelita McKenzie, Secretary; and Catherine Noonan, Consultant, Elementary Education for helping with the editing of this publication.

Guidelines and Recommendations for Elementary School

PHILOSOPHY and OBJECTIVES

Schools are For All Children

PHILOSOPHY AND OBJECTIVES

To insure that each pupil receives the best education possible, a school should have a carefully developed, comprehensive philosophy of education. The program of a school should be based on the school's philosophy. In any statement of educational philosophy, a school board, school staff, and community must thoroughly assess their basic values and answer the question, "What are the purposes of our school?" It is in the very process of evolving a statement of educational philosophy that the job of improvement will begin.

The statement of the school's philosophy should reflect the convictions of the staff on the following points:

- What is the responsibility of the school?
- What is the nature of the learning process?
- What is the content of the school program?
- What techniques of instruction are used in the school's program?
- What are the desirable student activities for the school?
- What are the goals to be attained by the school?
- What are the needs of the boys and girls served by the elementary school?

The philosophy should give direction to the objectives and affect every policy and activity of the school. It is most important to continuously evaluate the philosophy in terms of the objectives.

Each school should be free to develop its own education philosophy, consistent with the principles of American democracy and the special needs of its students.

To insure that the philosophy reflects the beliefs of the community, it should be developed cooperatively by the school staff, school board, and representatives of the community.

The Philosophy of The Elementary School Should Be Based on:

- An understanding of the characteristics of boys and girls and how children learn.
- The recognition of the school's responsibility for the maintenance of the fundamental concepts of American democracy through application and practice of democratic procedures.
- The recognition of the school's responsibility to help prepare the student for his present and future needs and responsibilities.
- An understanding of the relationship of the school to other social, political, and economic institutions.
- The general needs of the district: intellectual, social, political, economical.
- The provision for a wide range of experiences and activities and preparation for further education.
- A continuing evaluation of the school's program for its youngsters.

Guidelines and Recommendations for Elementary School SUPERVISION and ADMINISTRATION

The Principal and Staff — Strategic Leadership

SUPERVISION AND ADMINISTRATION

Administration

The school administrator is responsible for working with his staff, school board, and community leaders in maintaining and improving the quality of educational instruction and facilities.

In the area of school-community relations, the elementary school principal:

- Is aware of the importance of communication in achieving progress in education and thus assumes responsibility for planning and coordinating a public relations program in the community.
- Remains abreast of the latest educational findings and keeps the public informed.
- Works with parent and teacher groups to increase awareness of educational problems.

In the area of pupil personnel affairs, the elementary school principal:

- Is familiar with the New Hampshire Revised Statutes Annotated Relating to Public Schools.
- Is responsible for developing clearly written policies on attendance.
- Determines the means of putting into effect a clearly stated school board policy on discipline.
- Helps to maintain cumulative records throughout the school life of each pupil.
- Provides the leadership for improving the method of reporting children's progress in school.

In the area of staff personnel affairs, the elementary school principal:

- Meets with candidates for teaching positions before they are hired.
- Observes the candidate in a classroom situation.
- Reviews applications, records, and recommendations of the candidate prior to making a final decision.
- Assumes responsibility for helping beginning teachers and those returning after a long absence.
- Examines with his staff recent developments in theories of learning and child growth.
- Works with teachers to reorganize and improve courses, marking systems, promotional policies, and reporting systems.
- Promotes in-service programs.
- Arranges conferences when necessary.
- Encourages staff participation in such experimental programs as team teaching, team learning, and the non-graded schools.
- Institutes an analysis of teaching assignments and job specifications.

In the area of finance and business management, the elementary school principal:

- Participates in planning the school budget – balancing school needs against the district's financial capabilities.
- Makes a complete study of immediate and long-range needs for his school.
- Is responsible for maintaining school facilities in good repair, and protects the health and safety of students.
- Recommends alterations in school plant as dictated by enrollment and curriculum needs.
- Presents a long-range plan to provide for economy and up-keep through the office of the superintendent of schools.

Supervision in The Elementary School[1]

Supervision is a leadership service through which human and material resources are identified, developed, and organized so that maximum growth and learning may take place. This leader-

[1] *Can You Improve Your Supervision?* New Hampshire State Department of Education, Concord, New Hampshire, 1961.

ship service is given by the supervisory team composed of superintendent, supervisor, consultant, principal, and classroom teachers. Supervision is aimed at studying and improving all factors which affect learning and child development. This requires skill and competence in developing and maintaining effective human relationships.

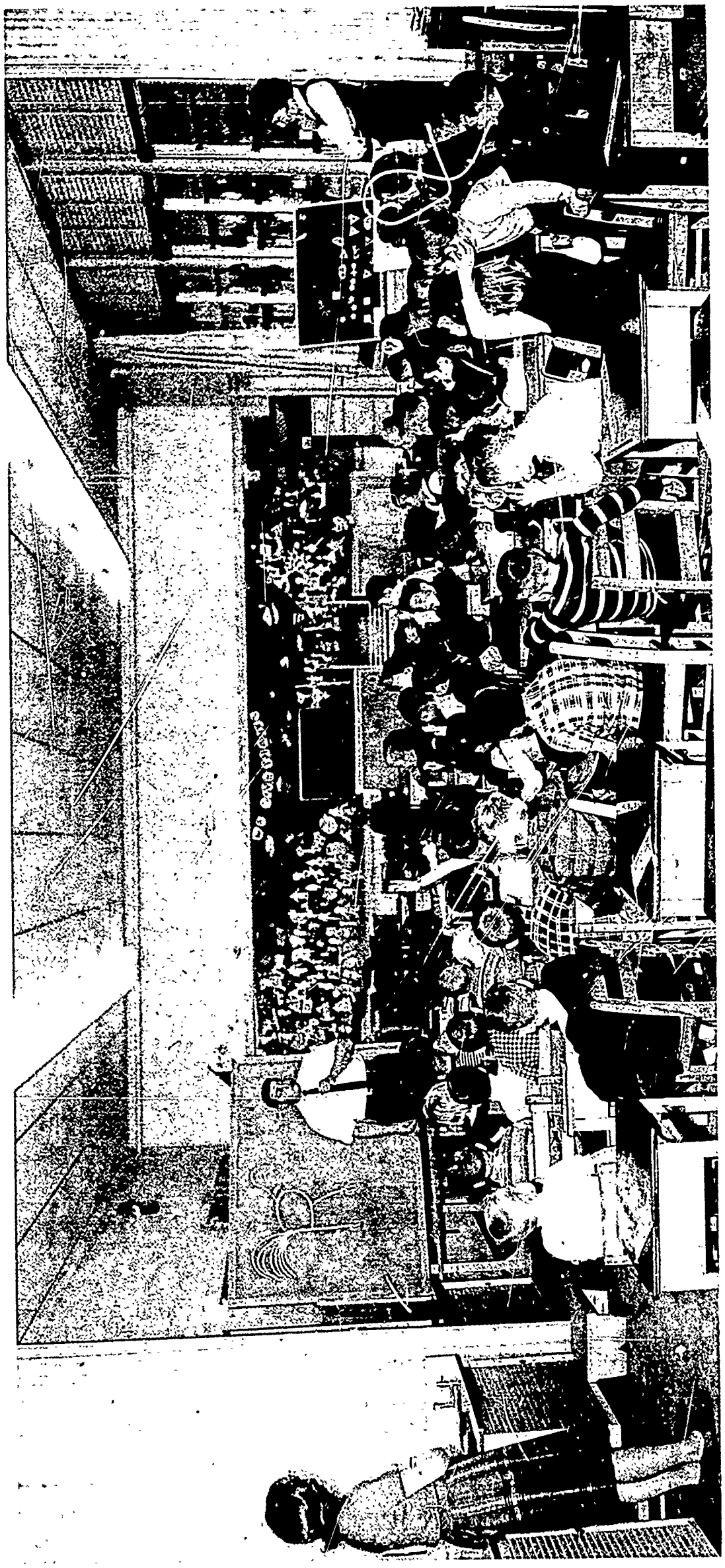
The supervisory team member should endeavor to meet professional qualifications, including previous experience as a teacher in his area of supervision; success as a leader of adults; training beyond that needed for teaching; active participation in local, state, and national professional associations; and fulfillment of State requirements for his supervisory position.

Supervisory responsibilities include:

- Providing opportunity for explanation and discussion of newly developed curriculum guides.
- Assisting with the implementation of new programs.
- Providing professional books and journals.
- Assuming leadership in experimentation.
- Becoming acquainted with newer practices through reading of research and observation.
- Attending special conferences to keep informed.
- Setting up a plan of curriculum study.
- Visiting classrooms on schedule and invitation and following up on these visits.
- Providing for conferences, meetings, and in-service education.
- Assisting substitutes and student teachers.
- Sharing and exchanging ideas with staff members through the preparation and use of manuals, guides, handbooks, bulletins and newsletters.
- Improving instruction through guidance.
- Public relations.
- Planning.

A workable philosophy of education for the total growth and development of children can be achieved through the cooperative efforts of the supervisory team and the entire school staff. These groups should uphold the attitudes and conduct reflected in the Code of Professional Ethics established by the New Hampshire Education Association and the National Education Association.

Guidelines and Recommendations for
Elementary
SCHOOL
ORGANIZATION



The Non-Graded School and Cooperative Teaching

ELEMENTARY SCHOOL ORGANIZATION

The elementary school organization should provide coordination among classrooms, grade levels, and special classes.

School districts, individual elementary schools, and classrooms should be organized in the pattern which will best meet the needs of all children within the schools and be coordinated with the organizational patterns of receiving schools.

SCHOOL DISTRICT ORGANIZATION

The local school district should:

1. Establish an organization of its school system according to the philosophy and needs of the community. Perhaps this should be according to one of the following common forms:

   Organization Plans
   - K – 6 – 3 – 3
   - K – 6 – 2 – 4
   - K – 6 – 6
   - K – 8 – 4
   - K – 4 – 4 – 4
   - K – 5 – 3 – 4

2. Coordinate elementary schools with receiving secondary schools.
3. Prevent overloading in any one school as pupils are assigned and, if necessary, transfer pupils to other schools in the district to equalize class loads.
4. Consider the transportation factor in the assignment of pupils.
   - The maximum bus route should not be of more than 40 minutes' duration.
   - No bus should arrive at the school more than 30 minutes before school opens, or leave more than 30 minutes after school closes.
5. Recognize economic advantages of the sharing of school facilities. A school plant consisting of two or more schools should be planned to allow sharing of facilities such as playgrounds, gymnasium, cafeteria, library.
6. Encourage the sharing of instructors and personnel for good instruction. A small school should cooperate with other schools in the sharing of specialized teachers, in such areas as art, physical education, music, speech, library, and remedial reading.
7. Operate schools of sufficient size to profit from the following advantages:
   - One teacher for each grade level
   - Supervising principal
   - Secretarial help
   - Increased possibilities for grouping of pupils
   - Specialist on full-time basis
   - Better facilities in the school plant
8. Include the kindergarten as part of the elementary school organization plan.

ELEMENTARY SCHOOL ORGANIZATION

The elementary school should:

- Provide pupil-teacher ratio of 20-1 or less in kindergarten, and 25-1 or less in grades 1-6.
  - More individual instruction and attention can be given the child by keeping the teaching load within these limits.
  - The younger child needs more individual teacher time for his school adjustment and learning experiences.
- Utilize the staff wisely.
  - Teacher assignments to grade levels should take into consideration teacher's training, ability, experience, temperament, and suitability for a certain age group.

  - Consider teacher specialties when assigning teachers. (For example, a teacher with training and interest in science might well be assigned to teach science in a departmentalized program.)
  - Effective use of teacher aids should be considered.
- Encourage the flexible use of all plant facilities. (For example, using an auditorium for large-group instruction.)
- Identify and specifically provide for the exceptional child.
  - Early identification of these children is necessary to properly provide for their needs.
  - These special pupils, when identified, should be provided for by special teachers in special classes.
- Provide an elementary school day of at least 5 1/4 hours exclusive of the lunch period. Grades 7 and 8 in an elementary school should have a teaching day of at least 5 1/2 hours exclusive of the lunch period.
- Provide recess periods to meet the needs of pupils in each age group.
  - Lunch recess should not exceed one hour. (Outdoor recess time should not exceed 30 minutes.)
  - Morning and afternoon recess periods should not exceed 15 minutes each.
  - Total recess time for grades 7-8 should not exceed 30 minutes daily.
- Utilize educational television services in organizing the school program.
- Provide a school day for kindergarten of at least three hours.

Introduction

Elementary school organization is an important part of the learning environment for children. At the same time, it should be remembered that after the necessary grouping has taken place, teachers and administrators should be more concerned with what is happening to children in the respective classrooms, and how well they are making progress with the program, as well as how their interests and needs are being met.

Those responsible for the grouping of children and the organization of the school should consider the following examples of classroom organization and examine the respective strengths and limitations of each. They should study the needs of children and the school, and together as a team, develop that organizational pattern that will best meet the needs of boys and girls. Much professional discretion should be expressed in how this research will be used. These viewpoints are only a point of reference for the administrators and teachers interested in studying the organization of the local school. They are not all-inclusive, but rather a good beginning to the improvement in elementary school organization.

Some examples of different classroom organization are the following:

A. Self-Contained Classroom (A class having the same teacher for all or most of the school day)

Strengths of The Self-Contained Classroom

1. A child's well-being and the development of his potential become the major concerns of the teacher.
2. Subject matter in terms of its usefulness is recognized.
3. There is a skeleton program but rigid scheduling is at a minimum.
4. There can be close correlation of subject areas.
5. There is opportunity for teacher and children to build a classroom climate favorable to optimum learning.
6. Creativity is encouraged among all children rather than limited to special projects for the more intellectually-advanced pupils.
7. Transfer of skills across subject-area lines is readily accomplished by the same teacher.
8. Grouping within the classroom is flexible and temporary and based on short-term needs.

Limitations of the Self-Contained Classroom

1. Thorough preparation and planning may become very difficult because of the wide range of ability within the room.
2. An occasional child may have difficulty adapting to a particular teacher.
3. Since the teacher is responsible for broad areas of learning, depth may be lacking in some areas unless the teacher has a broad background of education.

B. Ungraded Classroom (A class which is not organized on the basis of grade and has no standard grade designation. Ungraded classes sometime are referred to as non-graded, or continuous progress classroom.)

Strengths of The Ungraded Classroom

1. Attention is given to the total development and continuous growth of the child.
2. The child who is slow to mature benefits because he has ample time to grow and make the necessary progress.
3. Success in learning occurs since the academic and social challenges are geared to the child's ability and readiness.
4. Bright youngsters are allowed to go beyond many of their age level and still have the opportunity to participate in certain activities with those who do not learn as rapidly.
5. Unnecessary repetition of material formerly prescribed for a year's work is eliminated; the child progresses on from his mastery level obtained from informal analysis.

Limitations of the Ungraded Classroom

1. The tendency to organize too-finely defined levels tends to create a lock-step type of progression rather than to encourage individual progress based on ability.
2. A child could be penalized by assignment for more than one year to a weak teacher.

C. Ability Grouped Classroom (A class grouped on levels of achievement; mental age; ability to do school work [IQ]; reading tests; achievement results; or any of the above combination.)

Strengths of The Ability Grouped Classroom

1. Special attention may be paid to children's particular abilities or talents since these are frequently the basis for initial grouping.
2. This type of grouping is easier to administer.
3. Materials and procedures may be adapted more readily since the range of ability is not as great.

Limitations of The Ability Grouped Classroom

1. Ability grouping tends to lull teachers into complacent beliefs that children are alike.
2. Children may become typed and placed at one level permanently unless reassessment of their abilities is frequent. For example, children who are "late bloomers" are typed too early in their school lives and may be permanently placed.
3. Classroom organizational patterns may become rigid administrative procedures.
4. A lack of balance between boy-girl enrollments may occur since girls mature earlier than boys.

D. Departmentalization (The organization of instruction in such a way that teachers specialize in one or two content areas and give instruction in these areas to several classes. Pupils or teachers move from room to room for different classes during the school day.)

Strengths of Departmentalization

1. Staff specialties are utilized.
2. Academic achievement, as measured by instruments which indicate the amount of facts acquired by students, may show higher results.
3. Teacher loads are equalized.
4. Depth of knowledge may be emphasized because of concentration on subject matter.
5. There is a definiteness in the use of the periods of the school day.
6. Free periods can be scheduled for teachers.

Limitations of Departmentalization

1. Individuals are lost in the large number of different pupils per teacher per day. Many children suffer because of lack of identification with any one teacher.
2. The practice of presenting an abundance of facts is often misunderstood.
3. Unbalanced burdensome assignments for after-school work may result.
4. A fragmentation of learning may occur because of lack of good communications among teachers of different subject areas.
5. The interrelation of ideas from one subject area to another becomes largely the responsibility of the pupil. Some children, because of their maturity level, are less able than others to benefit from this type of organization.

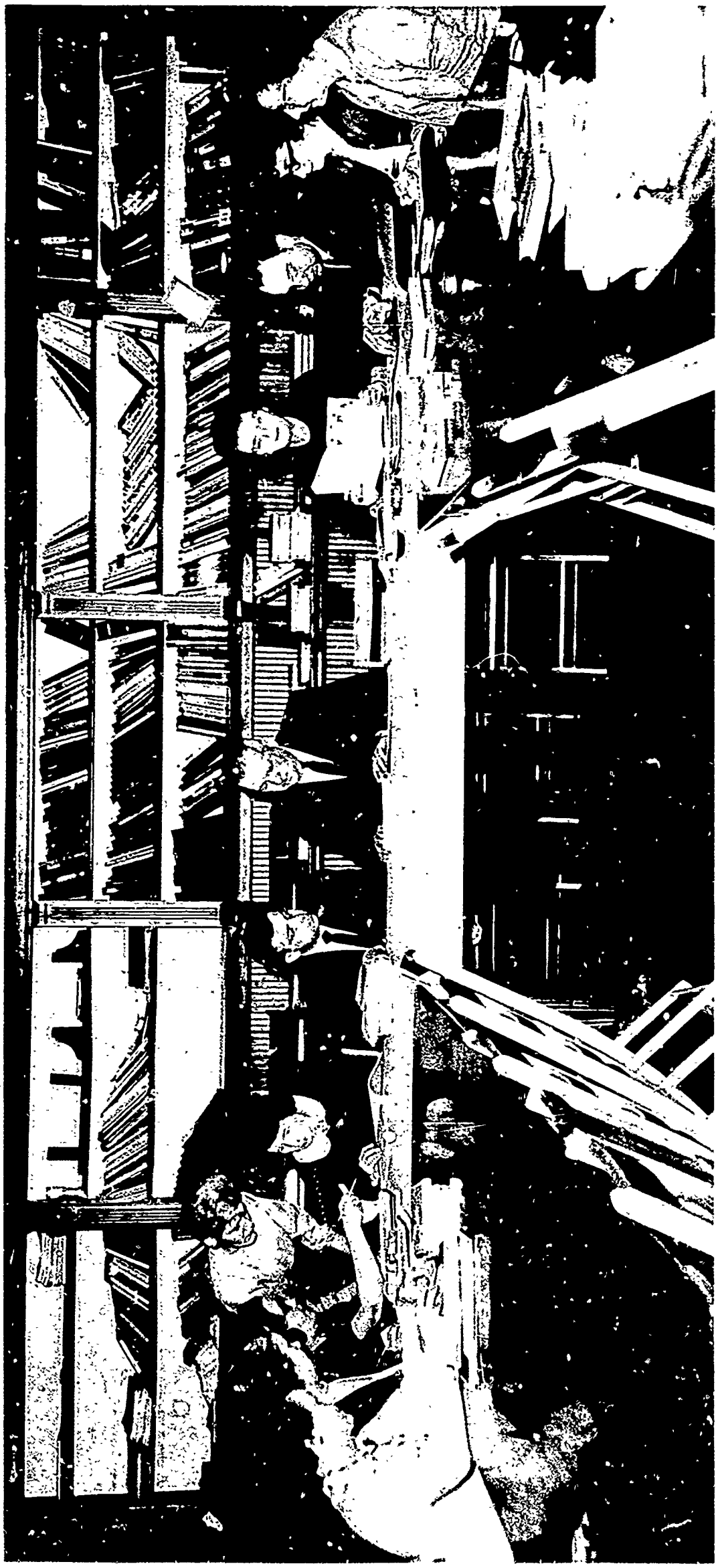
E. Team Teaching (Teachers planning, organizing and implementing the teaching of a class. When more than one teacher works together to meet the objectives of a teaching unit or the more long-range needs of children this is sometimes called "shared teaching" or "cooperative teaching."

Strengths of Team Teaching

1. Flexibility in planning the day's work is possible.
2. There is opportunity for relating areas of knowledge. Depth of knowledge is encouraged.
3. Staff specialties are utilized. Recognition can be given to the difference in capabilities of teachers.
4. Several teachers are concerned with a child's overall progress and guidance.
5. Superior teachers can be influential in programs of curriculum improvement.
6. Interchange between teachers is an integral part of the program.

Limitations of Team Teaching

1. Children's learning may be fragmented and compartmentalized.
2. Some children cannot adjust to several adults.
3. Teachers are less likely to know children as individuals because of the large numbers they work with during a day.
4. There is a tendency to focus on organization and subject matter rather than on the child.
5. Teachers may have difficulty in finding time to communicate for the extensive planning and evaluating needed.
6. Present buildings are not often conducive to team teaching.
7. A staff hierarchy may be created which might tend to lower morale.
8. Success of the program appears to depend heavily on the key person, the team leader.
9. Group planning by teachers is time consuming and a demanding process. Not all teachers will respond equally well to this organizational pattern.



Guidelines and Recommendations for Elementary School Curriculum

Cooperatively Developing The Modern School Curriculum

ELEMENTARY SCHOOL CURRICULUM

A Good Modern Elementary School Curriculum:

- Provides a balanced program of experiences in:
  - art
  - foreign languages
  - language arts
  - mathematics
  - music
  - physical education
  - science
  - social studies
- Includes the necessary library services.
- Provides the needed guidance services.
- Plans for special services, such as remedial reading instruction, speech therapy, classes for the mentally retarded, classes for the educationally talented.

GUIDELINES FOR ART IN ELEMENTARY SCHOOLS

Art is a form of expression. Each child may expect guidance from a capable teacher who understands children and art.

Every child needs frequent opportunity and stimulation to express his thoughts and feelings through art experiences.

Through art the child may
- exercise his imagination
- develop aesthetic judgment
- acquire sensitized awareness
- grow in ability to observe
- use his creativity
- gain in skill
- learn something of his art heritage

The art teacher will schedule — on call — with each of the 50 (maximum) teachers she is to serve. A precise length of period is too often a poor use of the art teacher: because
- Some classroom teachers can teach art well.
- The art teacher may have two or more classes working simultaneously.
- There may be large group stimulation followed by classroom work.
- The consultant service schedule permits the art teacher to give the kind of assistance at the time it is most needed.

The art teacher will
- assist the classroom teacher in planning for art and evaluating children's art expression
- may confer with parents
- may conduct workshops for teachers

The classroom teacher will seek to further her understanding of art,
- will work closely with the art teacher in planning, conducting, encouraging and evaluating children's art expression
- will have the children work with purpose toward self-selected goals
- will display the children's art

Supplies provided for all children to have several experiences

with painting	Tempera, watercolors; 3/4 to 1" bristle brushes; #10 to #12 brushes; paper — 18" x 24" newsprint and white
with drawing	chalk, felt pens, charcoal, ink
with weaving and stitchery	looms, 2 and 4 heddles, warp and weft cottons, yarns, needles, burlap

with modeling — waterbase clay, paper mache, wire
with printing — cutting tools, brayers, linoleum, ink
Books — such as Reinhold is publishing on processes, some on painting and famous pictures
Periodicals — such as "School Arts" and "Arts and Activities"
Projectors — slides, filmstrips, films, opaque

FOREIGN LANGUAGES IN THE ELEMENTARY SCHOOL (FLES)

Every American child in this generation should be provided with the opportunity to learn that his mother tongue is not the unique means of communication in this world and that peoples of other nations behave in cultural patterns different from his own. It is our contention that foreign language education should be an integral part of every child's learning experiences beginning in the elementary school. When a second language is introduced at an earlier age, the tendency to become "academic" is lessened — thus providing for an enriching, pressure-free situation in which all children can learn the sounds, basic speech habits, and culture patterns of a different people.

As early as December 18, 1959, Commissioner Charles F. Ritch, Jr., supported the implementation of FLES in New Hampshire in these terms:

> The State Board of Education is interested in encouraging the teaching of foreign languages in the public schools of our State. The Board feels that where practicable such instruction should begin in the early years of the elementary school experience.

This recommendation is strengthened by the findings of psychologists. There is every indication that a child should begin the study of a second language before the ages of ten or twelve, that is, before the junior high school years.

As a result of experiments made in the field of neurology, Dr. Wilder Penfield points out:

> Before the child begins to speak and to perceive, the uncommitted cortex is a blank slate on which nothing has been written. In the ensuing years much is written, and the writing is never erased. After the age of ten or twelve, the general functional connections have been established and fixed for the speech cortex. After that, the speech center cannot be transferred to the cortex of the lesser side, which is then fully occupied with the business of perception. The brain of the twelve-year-old, you may say, is prepared for rapid expansion of the vocabulary of the mother tongue and of the other languages he may have heard in the formative period. If he has heard these other languages, he has developed also a remarkable switch mechanism that enables him to turn from one language to another without confusion, without translation, without a mother-tongue accent.[1]

Therefore, it is strongly recommended that the study of a second language be made a basic part of the elementary school curriculum beginning in grade four or earlier in bilingual situations. Contrary to the misconception shared by many Americans up to this day, a foreign language is not mastered in two, three or four years. Rather, it is a process that should begin in childhood and continue through adulthood.

Since speech is basically habit, developed through repetition, the foreign language should be part of the daily experience of the student. In grades 4-6, fifteen or twenty-minute lessons with a variety of audio-lingual activities are rewarding. Longer periods are not advisable because of fatigue and loss of attention. Less frequent exposure results in incomplete learning, inability to handle more advanced material and dissatisfaction on the part of the pupil. Scheduling daily foreign language lessons is of prime importance in attaining the goals of good language learning and of fostering and maintaining pupil interest and satisfaction.

All children in grades 4-6, regardless of ability, should participate in the FLES program. It has been found that the successful audio-lingual learning of a second language is not always directly related to I.Q. scores, and all children should have the opportunity to learn of a foreign culture in the language of that culture. However, some selection or grouping should be made at grade 7 where the less able student will encounter reading and writing difficulties.

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[1] Wilder Penfield, M.D., "The Uncommitted Cortex, The Child's Changing Brain," *The Atlantic Monthly*, July, 1964, pp. 77-81.

GUIDELINES FOR TEACHING THE LANGUAGE ARTS

(Listening, Speaking, Reading, and Writing)

- Although Language Arts is a fusion of many skills and should be integrated, a definite time schedule should be set up to insure a balanced program.
- An effective program should be established through coordination of efforts at all levels to insure continuity and growth.
- Criteria should be set up for selection of subject matter to be taught at the various age levels.
- The child should be the center of instruction in contrast to emphasis on grade level or subject matter.
- The teaching should be consistent with the curriculum design and with the text materials selected by a coordinating committee.
- New experiences should be built upon past experiences. The proposed instruction should take into account the background and needs of the pupils.

Some Specific Suggestions for Language Teaching

- Language experiences should be of the type which provide an opportunity for all children to work at a level suited to their varied capacities.
- Good speech habits involve more than just "talking." From the primary grades, children should learn that good communication requires a worthwhile topic, keeping to the point, and knowing when to stop.
- The teacher should be aware of her own speech patterns. Children learn from example rather than from rule.
- Provision should be made for creative endeavors: dramatics, creative prose and poetry, choral speaking, and conversation.
- Even in primary grades, pupils can be forming concepts of punctuation, patterns of speech. When the concept is developed, the proper term can be taught with understanding.
- The functional approach to language can begin in the primary grades.

Some Guidelines for Spelling

- Phonetics is only one of several means to teach spelling. Good visual discrimination is equally important. The sight-sound approach should also be used. Recalling and writing words are the subsequent steps to mastery.
- Definitions should be developed with words taught.
- Learning that there are different spellings for the same phonetic element should train pupils to discriminate visually.

Some Guidelines for Handwriting

- Some formalized system of handwriting should serve as the local guide in planning the handwriting program. Finger movement, arm movement, or a combination of the two should be used according to individual ease.
- Systematic practice time needs to be provided.
- The child's posture and handling of pen or pencil is important. However, too much uniformity may result in much discomfort for some children.
- Attention must be given to the left-handed child. He must be taught that the position of his hand and paper will be the opposite of a right-handed child. His slant will be vertical or back-handed.
- All children should not be expected to switch from manuscript to cursive at the same time. Grade three is the generally accepted time for transfer, but because of marked developmental differences some may be ready in grade two and others not until grade four.
- Four letters, a, e, t, and r, are the most troublesome to write and cause most illegibility. These should receive special attention.
- Attention to good spacing can promote legibility.

Forms of Oral and Written Expression

Suggested for Elementary Schools

Oral Expression	Written Expression
Informal conversation	Letter writing
Purposeful discussion	Record keeping
Messages, announcements, and reports	Preparing reports and diaries
Dramatic play	Creative writing
Choral speech	The mechanics of writing, such as sentence structure, punctuation, capitalization
Observation of social amenities	Writing experience stories
Story-telling, jokes, and riddles	Writing labels, signs, and posters
Giving and following directions	Filling in forms
Radio and television techniques	Giving directions and explanations
Club meetings	Writing reviews and summaries
Use of tape recorder	Taking notes and making outlines
Use of telephone	

Some Guidelines for Reading

- A coordinated program is important. Services of a reading coordinator are recommended.
- Attention to individual differences (gifted and retarded) through:
  - — grouping according to ability
  - — multi-level materials
  - — recognition of need for corrective work by classroom teacher
  - — provision for extreme remedial cases that cannot be served by classroom teacher
- Setting up a definite program to cover all aspects of reading.
  Word-recognition skills:
  - — phonics — taught and applied soon enough to establish habit of attacking phonetic words and not relying solely on a sight vocabulary.
  - — sight words — those not following phonetic rules.
  - — structural analysis
  - — context
  - — dictionary

  Comprehension skills:
  - — main idea
  - — details
  - — relationships
  - — sequence
  - — emotional reactions
  - — figurative language
  - — critical reading

  Speed — in relation to difficulty of material and purpose for reading.
  Mechanics of reading:
  - — table of contents
  - — glossary — index
  - — punctuation marks
  - — pictures, graphs, maps
  - — footnotes
- Provision for continuous evaluation of whole program.
- Familiarity with research and experimentation of new techniques and methods.

GUIDELINES FOR TEACHING MATHEMATICS

We recognize that there may be several routes that one may follow in arriving at a goal. The exact procedure that a particular school district will follow in implementing needed change

in the mathematics program will vary from that of other districts. The spirit of the current reform should and must be adopted. Their specifics can be tailored to the needs of the district.

The elementary program should seek to lay a firm foundation in mathematics. Attention must be directed at the wider interpretation of elementary mathematics: arithmetic, algebra, geometry, and fundamental concepts.

If we truly believe that mathematics is a sequential study that builds upon earlier learning, we must seek to identify the elements that constitute the heart of mathematics. We have identified eleven such areas generally considered basic to elementary mathematics:

1. Sets
2. Number and numeration
3. Operations and their properties
4. Order relations
5. Relations and functions
6. Mathematical sentences
7. Problem solving
8. Geometry
9. Measurement
10. Graphing and statistics
11. Logic

It is the responsibility of the local curriculum study committee to develop a mathematics program that considers all of these areas.

The local committee should include elementary and secondary teachers, administrators, consultants, and lay people in the community. The major duty of the committee is the development of a sound program that permits sequential growth in mathematical understanding, provides for differing levels of ability, and is closely coordinated with programs that are to follow the elementary school experience. This local committee has responsibilities in the following areas:

1. Reviewing and selecting textbooks.
2. Organizing a program of services through effective communication with local school board and community.
3. Providing teachers with information about innovation in the teaching of mathematics and seeking to promote in-service courses for teachers as well as adult education classes for parents.
4. Keeping abreast of current reforms that are based on research in the area of learning theory.

Our committee endorses the report of the California State Department of Education[1] which stressed the following areas of mathematics:

1. Numbers and Operations. Increased attention to the mathematical properties involved in this cornerstone of the old arithmetic program, including:
   - Relationships among the operations.
   - Properties of the operations such as commutativity, associativity, distributivity, closure, and identity.
   - Distinction between number and numeral study of systems of numeration including non-decimal number bases.
2. Geometry. More informal and intuitive geometry should be included in the program study of various configuration such as sets of points, lines, line segments, rays, angles, and closed figures. Also include construction of figures using a variety of instruments and construction of three-dimensional figures.
3. Measurement.
4. Applications. Applications of mathematics are still important and one of the greatest challenges facing authors and teachers is to find challenging problems to replace conventional problems of slight mathematical substance and little appeal for pupils.

Attention must also be paid to developing skill in using the tools of mathematics, including:

1. Functions — The abstract concept that enables pairing numbers with objects or other numbers in counting, lengths, areas, formulas, graphs, and operations.
2. Mathematical Sentences — A valuable tool in problem solving and its use is encouraged.
3. Logic — Work with definition, implication, and quantification.
4. Sets — A knowledge of the language of sets is helpful in clarifying concepts and definitions in arithmetic and informal geometry.

[1] "Summary of The Report of the Advisory Committee on Mathematics to The Calif. State Curriculum Commission," Bulletin, Vol. XXXIII, No. 6, California State Department, December, 1963.

Some Suggestions for Content in The Elementary Grades

Kindergarten

1. One to one correspondence.
2. Counting, by ones as far as possible.
   a. Make use of every opportunity within the classroom.
   b. Use of ordinals from first through fifth or as far as child can go.
3. Recognition of groups.
4. Manipulation of groups.
5. Vocabulary — understanding words which express mathematical concepts:
   a. Size relationships.
   b. Time relationships.
   c. Spatial relationships.
   d. Quantitative relationships.
   e. Comparison.
   f. Position.
   g. Order.
   h. Value.
6. Recognition of numbers.
   a. Visual recognition of symbols.
   b. Use of numbers.
7. Developing the idea of addition and subtraction. Demonstrate within classroom situation using children, milk bottles, or whatever.
8. Writing of symbols to 10 if the concept of numbers has been thoroughly developed and the child is ready.

Grade 1

1. Measurement (liquid, linear, time).
2. Geometric shapes.
3. Problems involving money.
4. Introduction to fractions.
5. Addition and subtraction operations.
6. Use of the number line.
7. Grouping by tens.
8. Place value.
9. Introduction to symbols: $=, +, >, <, \neq, (), \square$.
10. Odd and even numbers.
11. Union of sets.
12. Simple counting sequences.
13. Skip counting sequences.
14. Commutative and associative principles of addition.

Grade 2

1. Extended set concepts.
2. Grouping by tens, hundreds, thousands.
3. Extension of place value in carrying and borrowing.
4. New symbols: x, $.
5. Roman numerals.
6. Addition, subtraction, multiplication facts.
7. Addition with carrying, subtraction with borrowing.
8. Extension of fraction concepts.
9. Simple problems using addition, subtraction, multiplication, also money problems.
10. Review of measurement (linear, liquid, time).
11. Horizontal and vertical presentation of processes.
12. Inequality problems.
13. Introduction to maps and charts.

Grades 3-6

1. Sets and their importance.

2. Enumeration System:
   a. Number — numeral, study of and distinction of
   b. Non-positional systems of numerations.
   c. Non-decimal systems of numeration.
   d. Numbers of finite systems.
   e. Place value.
   f. Use of ten digits or symbols.
   g. Renaming numbers.
   h. Exponents:
      — expanded notation
      — scientific notation
      — integers
3. Fundamental operations of arithmetic
   Properties and Techniques thereof:
   a. Addition and its inverse (subtraction). Properties of addition.
   b. Multiplication and its inverse (division). Properties of multiplication.
   Properties expanded through decimals and common fractions and percent. Algorisms of each.
4. Properties of numbers:
   a. Prime and composite.
   b. Factorization, complete.
   c. Greatest Common Divisor and Least Common Multiple
   d. Properties of even and odd whole numbers.
5. Equalities and inequalities:
   a. Number line activities.
   b. Algebraic notation.
   c. Solution sets.
   d. Compound sentences.
6. Graphing and Coordinate Systems:
   a. Graphing one dimensional coordinate systems and two dimensional coordinate systems.
   b. Exploration of relations and functions.
7. Geometry:
   a. The vocabulary of geometry.
   b. Geometric models.
   c. Geometric relations.
   d. Geometric figures and their specializations.
8. Measurement:
   a. The approximate nature of measurement.
   b. The metric system.
   c. Scale drawing.
   d. Measurement with precision instruments.
   e. Estimating measurement.
9. Problem solving:
   a. The method of problem solving and the use of a mathematical model.
   b. Patterns of problem solving.
   c. Use of a mathematical sentence:
      — Formulas
      — Deduction
      — Solution
10. Enrichment activities:
    a. Pattern.
    b. History of numbers.
    c. Probability.
    d. Short cuts in computing.

Some Guidelines for Improvement of The Program

- The formation of a local curriculum study committee made up of teachers and administrators representing all instructional levels is recommended. The responsibilities of such a group might include:
  - — Compilation of courses of study
  - — Revision of current courses of study
  - — Textbook review
  - — Maintaining communication between school board, community, and staff
  - — Providing in-service programs
- Teachers should strive to develop children's computation skills to the fullest, mindful of individual differences in ability. Children need assistance in recognizing "the world of mathematics" which surrounds them. They should be equipped with necessary skills and techniques to solve the problems which are found in their daily lives.
- Research has shown that children can learn complex concepts earlier than had been considered possible a decade or two ago. Children should be made aware at an early age of mathematical laws and principles as they relate to mathematical learning.
- Pupils should become familiar with the structure of our number system and with geometric and algebraic ideas. We desire each child to be exposed to the spiral curriculum, wherein he repeatedly returns to each topic at a higher level of sophistication in an expanded context.

GUIDELINES FOR MUSIC IN ELEMENTARY SCHOOLS

Music, a vital influence in the life of everyone, makes it essential for children to have the most capable teaching throughout elementary school.

Each group of pupils should have the assistance of a good music teacher regularly.

Each group of pupils, or each classroom, needs the attention of a specially trained music teacher frequently. Because speech and listening habits, which condition all learning, can be well developed through music, it is recommended that singing sessions be organized so that individual help may be given to the uncertain singers.

Experiences should be provided so that each pupil will learn some of the best in folk music, patriotic, spirituals and art songs.

Quality music for listening lessons should be selected. All of the music used should be of the best.

Instructional television can extend the range and quality of musical experiences in the classroom.

For the Administrator:

An elementary music program should be based on a clearly defined philosophy of music education and should point up objectives to implement the philosophy.

Each school district should employ an adequate number of accredited music teachers: The music teacher will present demonstration lessons for the classroom teacher, who will sustain the music program between the music teacher's visits.

School districts should provide in-service education programs in music for classroom and music teachers. Opportunities for instruction by qualified personnel should be provided for nine, ten, eleven and twelve year olds on string, woodwind, brass, and percussion instruments, in group and individual lessons.

Each elementary school should have a separate room for music instruction and several practice areas.

The local music personnel of each school should, with the classroom teacher, make comprehensive plans annually. The State Department of Education course of study may be used as reference.

Concerts in the community and surrounding areas, educational TV, and radio, should be utilized to the fullest extent.

Equipment for a well-organized elementary music program includes for each classroom:
- a record player
- a tape recorder
- an autoharp
- a set of melody bells

Readily accessible should be
- a library of records, filmstrips and books for pupils and teachers
- school-owned rhythm and orchestral instruments.

GUIDELINES FOR PHYSICAL EDUCATION

The following guidelines would apply to a good elementary school program. Each school system should strive to meet all of the following goals as time, money, and facilities will allow.

1. For grades 1-6, schedule one period per day, five days each week, minimum 15 minutes, exclusive of recess and time spent in dressing and showering.
2. Maximum class size should not exceed 35 pupils, unless special organization and leadership makes possible the effective handling of larger groups
3. Teaching load should not exceed 200 pupils per day, with adjusted work load for those who direct extra-class and complementary program.
4. Pupils should participate 15 minutes per day in sustained conditioning exercises and developmental activities. In the remaining available time, a variety of activities should be provided.

   Elementary physical education programs should have the following aims:
   - The elementary physical education program should be a part of the total physical and health education program, K-12. Activities taught should be sequential from grade to grade.
   - The activities should provide for organic, neuromuscular, interpretive-cortical, and emotional-social growth.
   - The needs and expectations of the community should be taken into consideration in the selection of activities.

Some Suggested Activities

- Pupils in the primary grades should be provided with a daily program of developmental excercises and activities.
- Every child in good health should run every day if possible.
- During each physical education period, all children should participate in a minimum of three vigorous activities.
- The curriculum should include a broad scope and balance of physical activities that promote well-rounded physical, social, and intellectual development. The program should contain a core of physical fitness activities designed to develop strength, speed, agility, balance, coordination, flexibility, muscular endurance, good posture and body mechanics, and organic efficiency.

Grades 1-3

Place emphasis upon learning the fundamentals of movement and building a foundation of physical fitness.

Activities can include walking, running, hopping, skipping, balancing, jumping, sliding, catching, climbing, hanging, throwing, rhythmical activities, creative movement experience, simple games, stunts, and tumbling.

Grades 4-6

The core of the physical fitness program in grades 4-6 should continue the emphasis on development of the back, chest, shoulders, and arms. Class instruction should include fundamentals of sports, skills in several team sports, track and field, and simple forms of individual and dual sports. Also use folk dances and other rhythmical activities, simple games involving running, tumbling, and gymnastics. Give simple tests of skills and knowledge.

Suggested Equipment

Essential	Ideal
Mats	Rebound tumbling (trampoline)
Vaulting box	
Balance beam (4" x 16' & 3' above the ground)	Parallel bars
Climbing ropes	
Record player	
Piano	
Volleyball standards	High jump standards
Softball	Soccer goal posts
Basketball backstop and goals	

Suggested Facilities

Essential	Ideal
Playroom area cleared 40' x 40'	Gymnasium 50' x 80', dressing and shower facilities
Field area cleared and flat	Field area and paved area for court games

The guidelines contained in this report are in line with suggestions from the President's Council on Youth Fitness. As previously mentioned, this program could be adopted in the situation where length of school day, budget, staff, facilities and equipment are in line with the physical needs of today's elementary school children.

GUIDELINES FOR TEACHING ELEMENTARY SCHOOL SCIENCE

Why do we teach science in the elementary school?

What shall science be in the elementary school? It should be the pupils becoming acquainted with appropriate science knowledge, science vocabulary, science equipment, science technique. It should be the testing of nature and the testing of one's explanations of problematic situations by experimentation. It should not be, primarily, a reading exercise nor the mechanical accumulation of the information listed in a syllabus. To be able to parrot back any knowledge does not guarantee that one "knows" that knowledge. And knowledge not "known" is easily forgotten, or, if not forgotten, is applied to new situations with difficulty, if at all.

There is much simple scientific knowledge which can be memorized. But how much better to have that remembering come from the experiment as an introduction! Science has an action pattern. It is the action of the experimental approach with the mental interpretation of that experiment which identifies science as a unique method.

Science in the elementary classroom should continuously encourage sound experimentation. In the early grades the recognition and description of properties should be encouraged, as well as the comparisons of properties. At the completion of the sixth grade, children should be more sophisticated in science education, especially in experimentation with a single variable, or several variables, in order to better understand and identify cause and effect in a variety of science situations.

Science is natural for young people, for young people are curious and are very prone to satisfy that curiosity by **doing** something about it. Lack of success in science instruction with young people might very well be due to our not daring to let them try action-science (as opposed to reading-science or visual-aid science); or, being in sympathy with action-science, we fail to provide the material means, space and time to perform the necessary activities. Every opportunity in science for a student to **do** something purposely should be utilized. This is the prime requisite for defeating sterile science instruction. This is also the prime requisite for developing student interest in science and for maintaining that interest. The process of "doing" in science is many times time-consuming; the experiment by its very nature is slow-moving. Going the way of least resistance via the reading-remembering or the audio-visual

processes can defeat the prime character of science and may ultimately turn too many students from science. Reading in science should be encouraged, but at the same time, the teacher should take time to have pupils experiment, observe, interpret and report. In the elementary school this "sciencing" activity more often will be individual or small group.

The general purposes for teaching science in the elementary school may be summarized as follows:

1. To help the youngster develop his skill in understanding his environment by combining his senses of hearing, seeing, testing, smelling and feeling with his ability to interpret these sensations in the light of that environment.
2. To encourage the youngster to develop a rational approach through such experiences as questioning, speculating, investigating and experimenting. Through these experiences he should become engaged in the relentless search for a richer understanding of the world in which he lives.
3. To help the youngster recognize the interrelationships of science concepts with his personal and social life.
4. To stimulate and maintain the active imagination of the elementary school student.

We must help children to:

- Develop scientific attitudes.
- Use the scientific method in solving problems.
- Understand the importance of, the reasons for, and the ways of practicing conservation of this country's natural resources.
- Understand that they live in a beautiful though complex universe.
- Investigate the significance of the interdependence of all things in nature.
- Understand their environment and its effects upon their daily lives.

What is the place of science in the elementary school curriculum?

In the past, science may have had a minor part in the total elementary school program. Today, science is as important as the three R's. In the past, the elementary school program was responsible for the teaching of reading, writing, and arithmetic. These basic tools are still a very important part of the elementary school program. Today our society is rapidly changing. Atomic energy, automation and Sputnik are causing our schools to re-evaluate the total program. At the same time our schools need to re-direct the learning opportunities of children for an atomic society of their own.

The science program of today needs to be based on the experiences of children in the classroom and outside the classroom. The elementary science program needs to encourage experimentation and its analysis, in addition to encouraging opportunities to seek information from other sources. Today, incidental teaching of science has no permanent place in the elementary school program. Every effort possible should be made to coordinate the teaching of science with the teaching of other subjects, such as, science and mathematics, science and social studies, science and health, and even science and grammar.

The total elementary school curriculum needs to have balance. Science should be in the elementary school program as an important subject-matter area, to be taught to all children.

Basic Curriculum —

The science curriculum for grades 1-6 is built around four major areas:

Area A — Earth-Space
Area B — Plants-Animals-Man
Area C — Matter and Energy
Area D — Earth and Its Resources

In these areas students will study:

- Living things
- Weather and climate
- Matter and energy
- Astronomy
- Geology
- Conservation
- Health
- Safety
- Communication

For details concerning this curriculum write the New Hampshire State Department of Education requesting the recent publication on elementary science.[1]

Some recommended equipment for the elementary school science program –

1. In those schools in which the science program is predetermined and known because of an adopted science series or a detailed local syllabus it is most highly recommended that the teachers at each grade level list the equipment needed to implement every facet of that program, and that all the required equipment be supplied those teachers. No list published by another group can exactly satisfy the equipment needs of a local system's particular program.
2. In the procurement of certain items of equipment, careful attention should be given to supplying an adequate quantity of those items. In some instances, from a science-teaching standpoint, having one of an item is almost worse than having none. For instance, one thermometer will allow the measurement of temperature in one particular spot, but several thermometers will allow your students to compare the effects of absorbed sunlight on several materials simultaneously or compare the rate at which the sun's energy is absorbed at several angles of irradiation. Or, one low-power magnifier lets one student study several specimens, or several students one specimen, whereas several low-power, low-cost magnifiers allow several students to view several specimens. You will find many situations in which more than one of an item will allow a more scientific approach and will allow more students to do or to view, as they should.
3. It is recommended that in each school there be a suitable workbench at which teachers and selected students can prepare science materials. Raw materials such as wood, nails, screws, nuts and bolts, cardboard, wire, sheet metal, glue, paper, and the like should be made available when needed.
   A suggested list of tools includes:
   cross-cut saw, small
   hacksaw
   pliers, with wire cutter
   screwdriver, small
   screwdriver, medium
   snips, sheet metal, 2" blade
   twist drill with drills (to 1/4")
   vise, 2" opening
   wrench, adjustable, maximum opening 3/4"
   hammer, claw, regular size
   file, wood 8"
   file, metal 6"

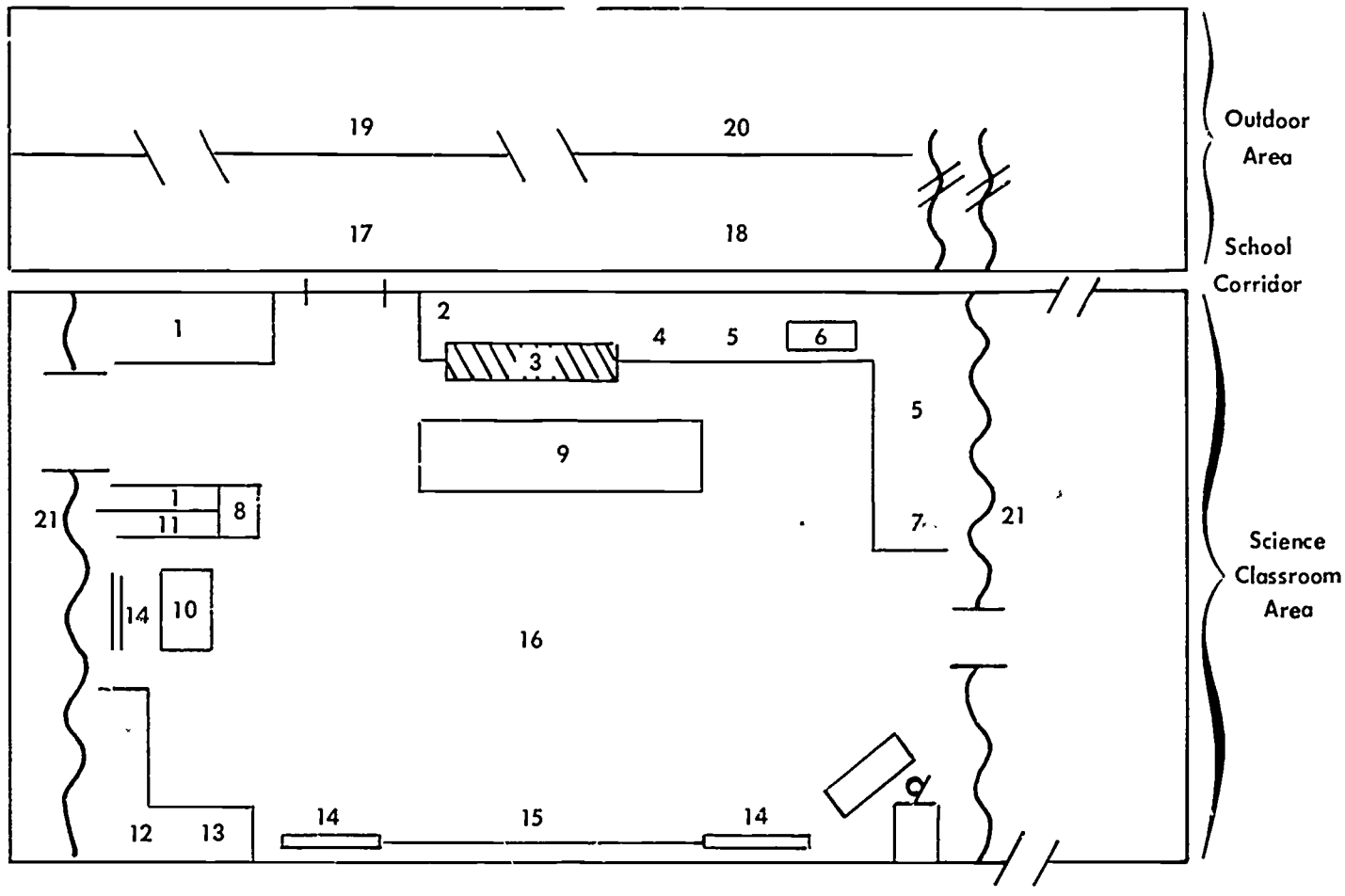
Facilities for elementary school science –

An educational plan is only as good as its implementation. There must be enough classroom space for an active learning program. Each classroom should have a place for carrying on science activities, and areas set aside for storing and distributing the equipment. The same space that is needed for science can also serve for art, for social studies projects, for committee work of various kinds and for group work in skill subjects. A room 30' x 35' is none too large. Most of the furniture should be of the movable type, the student desks having large, horizontal surfaces with vertical non-beveled edges so that desks may be butted to form vari-sized surfaces with a minimum of disturbing crevices. Provide as much wall counter as possible. It provides effective, economical work and display stations, and allows needed, dust-free storage space when the under-counter is enclosed with doors. An ample sink with a drainboard and hot-cold water is essential.

This all-purpose classroom would make an excellent science room:

[1] *Elementary Science Guide, Grades 1-6,* New Hampshire State Department of Education, Concord, New Hampshire 1961.

An elementary science classroom with outdoor science area



Key to All-Purpose Classroom:

1 Wardrobe
2 Storage cabinet
3 Workbench
4 Plants
5 Work counter with electricity
6 Sink
7 Animal cages
8 Teacher's closet
9 Work island
10 Library table
11 Book shelves
12 Aquarium
13 Terrarium
14 Tackboard
15 Chalkboard
16 Formal instruction area

21 Movable partitions allow for changing dimensions of rooms, and with the lighter, flexible-type partition facilitate large-group instruction when adjacent rooms are reversed and the wall partially or wholly opened.

Key to Outdoor Area

17 Outdoor area for class
18 Garden area
19 School forest and glen
20 School camp

Some Summary Viewpoints

- Science is as important as the 3 R's. Give it an equal emphasis in your school program.
- Science is a process. Make sure that your science program features **Questioning, Exploring, Experimenting, Observing, Measuring, Concluding,** and **Communicating.**
- Science is a body of organized knowledge. Be selective. Too often it must seem to children that the knowledge of encyclopedic data is the sole definition of science. Such science is sterile.
- Science is many times more effectively presented by science-major teachers in science rooms. Consider departmentalization of science for grades 5-8.
- Science requires the availability of the resources . . . materials, supplies, references, audio-visual aids, transportation . . . to carry out the program chosen. Tool up!
- Science is a method. But it is not an inflexible pattern of steps that must be followed. It may involve wondering, exploring, observing, reasoning, and deciding. It is used unconsciously by most people every day.

SOCIAL STUDIES

The social studies, as it relates to the elementary schools, deals primarily with man and society. It is the study of human relationships—the actions and interactions of individuals and groups. In its broadest sense the scope of inquiry embraces social institutions, cultures, and societies in both a physical and historical setting. The social studies draw their course offerings, content and skills from the social science disciplines of anthropology, geography, history, political science and government, sociology, psychology, and economics.

The social studies program is undergoing revision no less extensive than that which has affected mathematics and the natural sciences. Four arguments are commonly advanced for the reform of the social studies. First, the social studies have never been organized as a sequential program K-12. Second, the social studies do not reflect a thoughtful examination of contemporary developments. Third, a balanced multi-discipline approach is not evident in planning current programs. Fourth, the social studies have been regarded as subjects of minor importance in the total school curriculum.

Some Guideposts in Developing Programs

- Research indicates that children can cope with difficult subject matter at the earliest levels of instruction. However, a child's degree of social and emotional maturity must be carefully considered in the selection of course content and skills to be learned — especially in grades K-6. This consideration calls not only for more personalized instruction, but suggests also that effective treatment of such issues as racism, power politics, and conflicting ideologies demands a depth of sophistication not expected of most elementary school children.

  In other words, it is both possible and desirable to introduce difficult concepts earlier, but the application of these concepts by the child in dealing with complex social issues must be planned as a gradual process consistent with his emotional, social, and intellectual maturity.
- A priority concern in the K-12 program is to identify and organize subject matter and skills from the various social sciences in such a way that a developmental sequence emerges — a sequence that moves from the more basic concepts and skills to those demanding increasingly analytical and perceptive competencies. The sequence should provide for increasing attention to the pupil's ability to relate information to social problems with an eye for interdisciplinary relationships. This approach is not intended to denigrate the importance of facts in the learning process; rather, it assumes that mature thinking also involves the pupil's willingness to question, investigate, organize, and evaluate.
- The multi-discipline approach in the social studies, especially in grades K-6, provides a better balanced background of basic knowledge. Learnings from such disciplines as sociology, anthropology, political science, economics, and geography have not received sufficient attention in the past.
- A well balanced social studies program must take into account the great political, social, and economic forces that are changing forms of government and ways of life throughout the world. Greater emphasis must be given such areas as Africa, Latin America, the Far East, the Middle East, and the Soviet Union. In the K-6 program this means keeping concepts concrete and helping the child see them in terms of people and ways of life drawn from a broader world background.
- The study of the community and its history has a real value and deserves its rightful place in today's social studies curriculum. This viewpoint is not contradictory to the current trend to increase the exposure of pupils at all levels to peoples, issues, and ways of life outside our own culture block. No matter how broad we stretch the background we must still illustrate with a manageable field of investigation. A study of one's own locality, where it can be investigated first hand, lends to the social studies a reality hard to obtain in any other way. The conditions of local change, once understood, are capable of translation into the experiences of other people, wherever they may be found. The farsighted teacher will have her students turn to the primary sources readily at hand at the local level. (i.e. village, town, and city histories, military records, historical societies and museums, diaries

and letters, photographs and pictures, church records, cemetery inscriptions, aged residents, etc.)

- The place of value training in the social studies is a question which continues to plague curriculum planners. These guidelines admit to the controversial nature of this subject, but maintain that values are nonetheless real and significant forces affecting human behavior and are worthy and capable of discussion. Obviously, the teacher cannot impose his own sanctions of "right" and "wrong", but he has the obligation to help the student see the importance of his own values, the values of his society, and the values of other societies. It is extremely important, however, that a child recognize the difference between seeking information about values and indoctrination. Every effort must be made to impress upon the child that the same scientific tools of objectivity and open-mindedness must guide mature value judgments as surely as they do the collection, analysis, and interpretation of those facts on which judgments are based.
- The wide range of material represented by the respective social sciences requires continual selectivity. While the treatment of fewer topics in greater depth is a characteristic of the new curriculum, the K-6 program might well consider these additional points:
  a. Materials and procedures must be consistent with the objectives and desired outcomes of revised courses of study.
  b. Research suggests that young children are better able to understand concepts of place and distance earlier than they are able to understand concepts of time and chronology.
  c. The child's natural curiosity should be continually exploited. He should be encouraged to pose questions and to search for the answers himself wherever possible.
  d. Content must be selected that has meaning and interest for the child. The mundane and irrelevant has too long characterized the content of the social studies program. This is especially true of the primary grades which continue to introduce pupils to the social studies via the "friendly fireman."
  e. The social studies at all levels must provide greater opportunity for all pupils to gain in knowledge of their art heritage. All social studies teachers should seek opportunities to focus attention on the arts in the story of man.
  f. The social studies classroom must provide a wide variety of instructional materials and procedures. The single textbook approach must be seriously questioned in favor of many sources adequately supplemented by maps, pictures, graphs, statistical tables, films, artifacts, and monographs.
  g. An effective social studies program must continually evaluate its objectives in light of changing circumstances and knowledge. Children must learn to view society as constantly changing rather than static. They must learn that change comes from research and the gaining of new perspective in the various fields of knowledge.

Some Major Viewpoints

1. More difficult and challenging social studies concepts need to be introduced in the elementary grades. These concepts should be kept as concrete as possible.
2. The child's degree of emotional and social maturity must be carefully considered in the selection of content and skills to be learned at the various grade levels.
3. Social studies topics should be selected that have meaning and interest for the child.
4. Encouraging the expression of the child's natural curiosity should be of primary concern to the teacher in the stimulation and retention of interest in the social studies program.
5. The social studies should be presented as a sequential program moving from the more basic concepts and skills to those requiring increasingly analytical and perceptive competencies.
6. As the pupil progresses in the social studies sequence he should be encouraged to relate social studies information to the understanding and evaluation of social problems.
7. Social studies topics need to be treated in greater depth even at the expense of reducing the number of distinct topics.
8. More attention should be directed to the great political, social, and economic forces that

are changing forms of government and ways of life throughout the world.

9. The study of the local community and the use of primary sources need greater emphasis as they provide the pupil with a realistic and first hand field of investigation.
10. The pupil's initiative in questioning concepts, investigating and evaluating facts should be stimulated.
11. A better balance among the social science disciplines needs to be built into the social studies program.
12. The elementary social studies program must encourage the objective examination of social and national values.
13. The social studies program should not rely, at any level, on a single textbook approach. A variety of sources is strongly urged.

Guidelines and Recommendations for Kindergarten

The Modern Kindergarten — A Significant Part of The Elementary School

KINDERGARTEN

Some Background Information

Public school kindergartens were first introduced in the country in 1873. By 1900, the U. S. Office of Education reported 225,000 enrolled in the kindergartens. In 1950, the Bureau of Census reported an enrollment of 960,000 children in public and private classrooms. In 1963, the enrollment reached 2.2 million children in the United States.

In New Hampshire, as of September, 1965, twenty-three local school districts supported the public school kindergarten. The total number of kindergarten classrooms supported by these 23 school districts is seventy-four (74) with a total enrollment of 4,834 children.

This committee recommends that the kindergarten classroom be included in the elementary school organization.

Why Kindergartens in New Hampshire?

To help children:

- Become aware of their physical needs; learn healthful habits of play, rest, elimination and eating; build coordination, strength, and physical skills; and develop sound mental and physical health.
- Gain some understanding of their social world; learn to work and play fairly and happily in it; and grow in developing responsibility and independence, yet accept the limits present in living in a democratic society.
- Acquire interests, attitudes, and values which aid them in becoming secure and positive in their relationship with their peers and adults outside the home.
- Grow into an ever-deeper sense of accomplishment and self-esteem.
- Grow in their understanding of their natural environment.
- Gain some understandings of spatial and number relationships.
- Enjoy their literary and musical heritage.
- Express their thoughts and feelings more creatively through language, movement, art and music.
- Develop more appropriate behavior, skills, and understandings on which their continuing education builds.
- Observe, experiment, discover, think and generalize at their individual levels of experience and development.

What Parents Can't Do for 5-Year-Olds[1]

- Mothers with large families, or with jobs outside of the home, do not have the time to give their small children the constant attention and guidance they require.
- Children in rural areas, and often in urban areas, do not have the companionship of others their own age.
- Children need supervised experiences that will help them get along with others.
- Parents do not always have the training (and in most cases, simply do not have the time or money) to provide guidance and the variety of experiences offered by a good kindergarten.
- Gifted children need encouragement. Retarded children require special attention.
- Most parents, having limited experience in observing the differences among children, do not recognize the unique needs of their own children.

The Professional-Prepared Kindergarten Teacher

The kindergarten teacher needs a special kind of preparation with emphasis on developmental learning and a background on understanding of children and the entire program of early childhood education.

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1 "*Why Kindergarten?*" (Facts for parents of small fry), Bulletin, Department of Kindergarten-Primary Education, National Education Association of the U. S., 1201 Sixteenth Street, N. W., Washington, D. C.

This qualified teacher should be a graduate of an accredited four-year college with major work in early childhood education.

The kindergarten teacher should continue her professional growth through attending professional courses, conferences, workshops, or seminars. She should maintain her certification status with the New Hampshire State Department of Education.

The Kindergarten Program

The kindergarten program should help children to experience successful and useful learning skills. Good programs have common elements, such as:

- A balance between motor activity and passive interests
- A balance between individual and small group work
- A balance between aesthetic, social, emotional, physical and intellectual development
- Adequate equipment, materials and space for use indoors and outdoors

The good kindergarten program provides learning opportunities that are purposeful and useful to all children. The degree of attainment by each child will differ according to individual ability, background, and interest. A wide variety of experiences for young children should include:[2]

- Many occasions for speaking and hearing language spoken in functional discussion.
- Experiences to develop understanding and investigating skills
- Informal experiences with number and quantity
- Materials to encourage self-expression in art, music and the dance
- Many opportunities to deal with information on a firsthand experience level
- A chance to use media to reconstruct his perceptions of what he has seen and done
- Opportunities for building empathy for people

This curriculum should encourage active participation in the classroom activities, which to some may seem like play, but what may look like "just play" is serious work for these five-year-olds, and if properly nurtured and helped can produce important and healthy learnings: such as learning that school is a pleasant place to be, to think of others as well as himself, learning to use his body more skillfully, and learning to grow in independence and initiative, as well as learning to communicate ideas and feelings.

The kindergarten contributes significantly to Readiness for reading, and readiness experiences in other areas for all five-year-old children. Local school districts should examine the needs of five-year-olds in their respective communities and consider the support of a kindergarten classroom as a part of the elementary school organization.

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[2] Association for Childhood Education International, "*Basic Propositions for Early Childhood Education,*" Membership Service Bulletin, No. 1, Washington, D. C., 1965.

Guidelines and Recommendations for
The Elementary School Staff

The Quality of Teaching and The Quality of Learning

ELEMENTARY SCHOOL STAFF

"The elementary school staff consists of all school personnel engaged in providing a more wholesome and effective learning environment." [1] A competent, well-qualified staff is essential to a school providing quality education for all pupils. Each member of the school staff is important in a well-organized school and should possess professional knowledge and skills which will enable him to do the job effectively. Each should possess a sympathetic understanding of children and should meet state and professional requirements.

"The elementary school principal, a key person in the organization, should be responsible for providing effective educational leadership, good public relations, good administration and supervision, and efficient school management. In elementary schools, these should be fused and integrated so as to complement each other." [2]

Guiding Principles

The elementary school staff provide:

- Sufficient teaching staff to adequately meet the needs of the student with a ratio of no more than 25-1 for all grades and 20-1 for kindergarten.
- Qualified specialists to aid the teachers and parents in gaining a better mutual understanding of the child and the school.
- A variety of special services to meet the individual needs of the students.
- Secretarial assistance from part-time to full-time when a school reaches an enrollment of 300.
- A supervising principal who should be employed full time in schools of an enrollment of 300 or more.

Some Guidelines

The principal should:

- Hold an elementary certificate.
- Have earned credits beyond a Master's degree.
- Be enrolled in a continuous program of education.
- Be designated as the supervising principal, teaching principal, or head teacher.
- Show that he has a professional attitude by demonstrating knowledge of latest developments in the field.

The teacher should:

- Have a Bachelor's degree or its equivalent and hold a valid New Hampshire elementary teacher's certificate.
- Have a broad educational background.
- Have thorough preparation in his special field and demonstrated professional competence.
- Be physically and mentally fit and emotionally mature.

The nurse should:

- Possess a license to practice as a registered nurse.
- Be a graduate of a certified school of nursing.
- Meet the certification requirements of the State of New Hampshire.

The speech specialist should:

- Be available to each school system to work as a consultant.

The remedial reading teacher should:

- Have a Bachelor's degree in elementary education with graduate study in his special area.
- Have at least three years of acceptable teaching experience.
- Devote time to children who have reading inadequacies.
- Have classes of seven students per class session, but not more than ten.

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[1] *Elementary Evaluative Criteria*. Boston University School of Educatic , Research Project by James F. Baker, 1953. Pg. 91.

[2] *Ibid.*

The nurse-teacher should:
- Serve as a full-time staff member for not more than 500 students.
- Maintain continuous program of helping the teacher to offer an extensive physical and mental health program in the classroom.
- Meet the certification requirements of the State of New Hampshire.

The guidance counselor should:
- Serve full time in a program with a ratio of not more than 300 students to one counselor.
- Have a master's degree or its equivalent in guidance.
- Meet the academic and professional requirements of a teacher.
- Have two school years of acceptable teaching experience in elementary education, grades K-8.

The teachers of art, music, and physical education should:
- Help teachers by demonstrating lessons, assisting in the planning programs, and providing consultant service.
- Be a qualified teacher with graduate work in their major area.

The librarian-teacher should:
- Be employed on a part-time basis in schools having 200 to 400 pupils.
- Be employed full time in schools with 400 to 700 students.
- Be a certified librarian in schools with more than 700 students.

The teacher consultant should:
- Be designated as director of instruction.
- Have approved graduate work in special courses.
- Have a Master's degree or its equivalent.
- Have three years of acceptable teaching experience.
- Meet the academic and professional requirements of a teacher.
- Be enrolled in a continuous program of education.

The secretary should:
- Have at least a high school diploma.
- Have completed the equivalent of a high school commercial training course.

The custodian should:
- Have adequate help to keep the plant in sanitary and efficient operation.

The school lunch personnel should:
- Be adequate to maintain a clean and efficient lunch program.
- Have an annual health check-up including chest x-rays.
- Possess a food handler's permit.
- Have special training in the field.

Bus drivers should:
- Have an annual physical examination.
- Receive special training in driving vehicles of the type.
- Have a certified driver's permit in New Hampshire.

Guidelines and Recommendations for
Elementary School Guidance

The Guidance Counselor Working with Children
— Ben's Photo Shop
Exeter. N. H.

INTRODUCTION

The school guidance counselor uses his specialized knowledge of child development to assist the teacher in managing his classroom and to help the child cope with personal problems. He aids the teacher in maintaining the emotional health of the pupils and in evaluating the intellectual capacity of each child in order to arrange proper instruction.

The guidance counselor fulfills the educator's responsibility of helping the child strengthen, correct, or adjust to his personal traits. Traits that might impair a child's learning skills or emotional development are especially dealt with. Parents and teachers often lack the specialized education, experience, and time to identify the characteristics that may result in poor mental health. School counselors are equipped to identify such characteristics and to help parents and teachers to cope with them.

Guidance services should be continuous, beginning when a child enters school and following him through and beyond his years of formal education. Guidance in the elementary school should help all pupils to make the maximum use of their abilities both for their own growth and their later contribution to society. This involves an early recognition of intellectual, emotional, social, and physical strengths and weaknesses, the encouragement of special talents; the prevention of conditions which impede learning; and the early use of available resources to meet the needs of the children.

Through in-service programs and informal conferences, the counselor enriches teachers' understanding of normal child development and suggests methods of handling problems of learning and behavior. Self-motivation toward achievement begins early in life with attitudes formed in the home, study habits in the lower grades, and early enjoyment of learning which develops through successful intellectual experiences.

A modern problem is that there are fewer jobs available for unskilled labor. Dropouts, therefore, become an increasing social problem. The national waste of manpower can be lessened by fully recognizing and nurturing the talents of children. An elementary school guidance program helps identify potential dropouts. This early identification is necessary to develop an effective program for retaining these pupils at the secondary school level. Some of the procedures involved in successful retention of potential dropouts include curriculum changes, changes in disciplinary policies, and the creation of a more favorable psychological climate in the school and at home.

Elementary school guidance programs pay off. The formative years are vital in the development of character, learning, and behavior. Considering the vast cost of institutional care of emotionally disturbed patients, the imprisonment of criminals, and providing for the delinquent, indigent, and the unemployed, the preventive steps offered in early and continuous guidance is well worth the monetary investment.

Philosophy

Guidance programs in the elementary schools are developed to assist each child in achieving full intellectual potential and personal-social competence.

Objectives

Basic objectives of the guidance program in the elementary schools are:

1. Early identification of each child's intellectual and personal characteristics.
2. Maximum development of his academic and creative growth.
3. Early diagnosis and provision for preventive and corrective action on any learning or personality problems.

Personnel

Responsibility for guidance services is shared by all members of the school staff who come in contact with the pupil. School systems, because of their needs, size, and interests may differ in the number of personnel involved in guidance. The guidance team may consist of principal, classroom teacher, guidance consultant, school nurse, school physician, school psychologist, social worker, reading and speech specialists, and others.

- Each elementary school should have the services of a trained school counselor.

- A ratio of one counselor to 300 pupils is recommended. A minimal program should have a ratio of one counselor to 500 pupils.
- Each school should have access to a school psychologist.
- School districts with a school population of 3,000 pupils should have a full-time psychologist.

Role of the School Counselor

The School Counselor:

1. Conducts intellectual, educational, and personal-social evaluations of pupils referred to him and prepares reports with recommendations for the use by the principal, teachers, and other staff members who have contact with the individual pupil.
2. Consults with each teacher concerning the problems of individual pupils.
3. Consults with parents concerning the problems and progress of a child.
4. Assumes major responsibility for group conferences concerning individual pupils with staff members and parents.
5. Counsels pupils who have personal problems which impede their learning, social adjustment, or classroom participation.
6. Refers pupils who need more professional diagnosis and treatment to appropriate specialists or agencies, such as school psychologist, school physician, family service organizations, psychiatrists, and mental health clinics.
7. Works with the principal on individual cases, matters of general policy, and curriculum.
8. Assists in teacher orientation to guidance services through conferences and seminars.
9. Provides for group guidance activities.
10. Works with community agencies, organizations, and individuals.
11. Administers individual intelligence tests and interprets results to appropriate staff members, interested specialists, referral agencies, and parents on request.
12. Develops and conducts a group testing program for the regular evaluation of pupil intelligence and achievement; summarizes and interprets test results to all staff members; compiles class-wide and school-wide statistics; and prepares reports on these for all staff members.
    A. The school counselor should supervise a testing program which should include, as a minimum, the following:
        A. A pre-school readiness test.
        B. Three group IQ tests, grades 1-6.
        C. Three achievement tests, grades 1-6.
        D. Availability of individual intelligence testing on referral.
13. Supervises the maintenance of cumulative record folders for each pupil.
14. Assists in determining effective grouping, placement, promotion, and pupil evaluation.
15. Assists in screening pupils for special education. Some of the categories requiring special education are intellectually retarded, intellectually gifted, physically handicapped, emotionally disturbed.
16. Cooperates in orientation program for pupils entering a new school.
17. Consults with other interested people such as clergymen, attendance officers, probation officers, juvenile officers, social workers, and public welfare workers, whenever necessary and appropriate, concerning the problems of individual pupils.
18. Interprets and reports guidance services to the community.
19. Actively participates in appropriate local, regional, state, and national professional organizations.
20. Continuously evaluates the guidance program informally through staff conferences and research.

GUIDANCE ROLES OF OTHER MEMBERS OF THE SCHOOL STAFF

The Superintendent's Role

The Superintendent:

1. Recognizes the need and makes provision for guidance services.

2. He defines the roles of guidance personnel.
3. He provides adequate secretarial service for the guidance program.

The Principal's Role

The Principal:

1. Provides leadership in direction, planning, and evaluation of the guidance program by the entire staff within his school, including the provision of a cumulative record folder for each pupil.
2. Initiates an in-service program to aid the teacher and other personnel in understanding their responsibilities for providing guidance services to all children.
3. Provides liaison between school, home, and community in the area of guidance services.
4. Makes time available for parent-teacher-counselor conferences as needed.
5. Works to facilitate continuity in program for all students for successive school levels.
6. Cooperates in the scheduling of a testing program.
7. Provides adequate facilities for counselor to carry on private counseling and group conferences.
8. Works closely with counselors on individual cases.

Role of the Classroom Teacher

The Classroom Teacher:

1. Creates and maintains an emotionally and mentally healthy climate in the classroom to promote maximum learning for each pupil.
2. Observes pupil behavior and shares with the counselor the responsibility for the identification and referral of children with special needs.
3. Uses information obtained from the counselor to aid in adapting classroom experiences to meet individual pupil needs.
4. Uses socio-metric procedures and techniques to better understand inter-personal relationships between children.
5. Participates in conferences with parents periodically and refers parents to counselors whenever appropriate.
6. Administers a group testing program using the diagnostic test score results for more effective class instruction.
7. Contributes data and reports to cumulative record folders.
8. Visits in homes of pupils whenever possible.

Role of School Psychologist

The School Psychologist:

1. Conducts psychological and educational diagnostic evaluations of pupils referred and prepares reports with recommendations for the use of guidance personnel, administrators, teachers, and other staff members who have contact with the individual pupil.
2. Conducts staff and parental conferences.
3. Provides in-service training of staff members for conducting effective parental conferences.
4. Refers individual cases for more extensive diagnostic work and treatment to agencies such as family service, psychiatrists, and mental health clinics. Each school district should have access to a mental health clinic or a family welfare agency for proper referral.
5. Conducts play therapy and psychotheraphy.
6. Assists in screening pupils for special education. Some of the categories requiring special education are intellectually retarded, intellectually gifted, physically handicapped, emotionally disturbed, and combinations of these.
7. Works as a member of a team of pupil personnel specialists to promote mental health and a favorable learning climate for all school pupils.

Role of other Pupil Personnel Specialists

Other Pupil Personnel Specialists:

1. Participate in case conferences about individual pupils.
2. Report physical and remedial test results and interpret treatment and problem solutions to all staff members who are involved with the pupil.
3. Develop programs of speech therapy.
4. Develop programs of remedial reading and foster mental reading.
5. Improve and maintain physical health of pupils.
6. Follow up delinquent attendance problems.

Guidelines and Recommendations for the Elementary School In-Service Program

Improving One's Self Through Evaluation

IN-SERVICE EDUCATION

In-service education is a tool through which educational programs, objectives, and improvements are realized. Some of the objectives of these programs are: (a) to more adequately implement curriculum revisions, (b) to assist new teachers in the schools, (c) to acquaint school personnel with the latest research and improved teaching methods and, (d) to improve communications among educators.

To meet these objectives, all school systems must systematically plan and institute meaningful in-service educational programs.

A good in-service program should be part of a long-range plan, both for individual and school program improvement. It should be developed cooperatively by the professional staff and administration and partially or wholly financed by the local school district or districts.

Some Different Types of In-Service Programs:

Local
- Workshops dealing with specific areas, such as testing, reading, science, mathematics, physical education, citizenship education, and social studies.
- Staff orientation for newcomers to a school system and review of report procedures.
- Departmental meetings conducted at all levels to work on mutual problems.
- Grade level or teachers' meetings attempting to solve particular problems of the group.
- Curriculum study groups to evaluate current programs and prepare revisions.
- Visits by teachers to other schools and classrooms.
- Visiting consultants.
- Credit courses

College
- Advanced degree programs
- Special college courses for teachers

To Implement In-Service Programs:

Local
- Provide for released time for teachers during the school day.
- Organize orientation meetings prior to the opening of school.
- Have current research material available for the staff.
- Make use of staff members in studying current problems.
- Employ consultants to assist the staff in curriculum development.
- Establish sabbaticals.
- Work jointly with school districts in the immediate area.
- Make funds available for the employment of staff members during the summer months for curriculum improvement.

College
- Organize courses cooperatively with colleges and near-by school districts whenever possible.
- Use college resource people with staff planning groups.

Guidelines and Recommendations for

The Elementary School Library

Quality Learning and Library Services

— Ben's Photo Shop
Exeter, N. H.

ELEMENTARY SCHOOL LIBRARY SERVICES

The school library is one of the basic requirements for quality education. In the space age, with the rapid increase in the quantity of knowledge available and the constant demands placed on our schools by society, a school library is an essential center for every school. The school library program provides teachers with the means of enriching the content of their courses through access within the school to a collection of a wide variety of library material.

The school library is a resource center where pupils may become adept in finding and using materials. The school library program should encourage self-development and arouse a growing interest in reading and the use of the library.

Objectives

The elementary school library should:

- Furnish an adequate supply of books, pamphlets, and audio-visual aids to complement and enrich the entire school curriculum.
- Help the pupils keep pace with the changing world.
- Provide each student with an opportunity to seek his own level of ability and interest.
- Coordinate the books and materials with the total elementary curriculum.
- Contribute to the general guidance program through its wide range of reading materials.
- Encourage the teacher and the school librarian to work together to improve the pupil's reading. The cooperation of the teacher and librarian can greatly enhance a child's education.
- Encourage better reference and research techniques.
- Provide an instructional program in library skills so that an efficient transition can be made to the secondary school library and public library.
- Act as a stimulus to the self-education of each child. It stimulates interest in reading, fosters literary appreciations, and cultivates a respect for scholarship.
- Eliminate a duplication of books that each individual room would have to provide.

Organization

1. In the organization of a school library, it is important that all books and materials be easily and quickly available to children and teachers.
2. All books acquired should be classified by the simplified Dewey-Decimal system.
3. All elementary school libraries should maintain an up-to-date card catalogue file.
4. A careful record of books borrowed and returned should be maintained.
5. An Accession Book should be used to keep a record of books as they are purchased.
6. Identification information, including school stamp, accession number, and classification number should appear on each book.
7. Books should be arranged on the shelves according to standard library practices.
8. Each school system should establish its own rules and regulations to cover the operation of the library.

Staff

1. Schools with an enrollment under 200 pupils, which provide a centralized library, may operate with parent aides under the supervision of the principal or designated staff member.
2. Schools with enrollment of 200-400 pupils should employ a person with a knowledge of library procedures for at least 20 school hours per week.
3. Schools with enrollments of 400-700 pupils should employ a full-time person who has had at least twelve semester hours in library science.
4. A full-time, qualified librarian should be hired for any schools having more than 700 pupils.

Basic Equipment and Supplies

Libraries should be carefully planned for those processes normally carried on in library routines. The following items are suggested for the library:

1. Charging desk
2. Trays for book cards
3. Librarian's desk
4. Suitable tables and chairs for pupil use
5. Stepladder
6. Typewriter
7. Legal size filing cabinet
8. Book carts
9. Magazine holder
10. Dictionary stand
11. All other basic supplies considered essential to a well-organized library.

For a complete list of library equipment and supplies, refer to Standards for School Library Programs, American Association of School Libraries, Chicago: American Library Association, 1965.

Elementary School Pupil Library Collection

1. A well-planned library has books and materials carefully chosen and coordinated with the public library and any nearby high school library.
2. The book collection is selected by a committee consisting of the library staff and members of the teaching staff.
3. The distribution of books selected for the library includes volumes to cover all areas of instruction.
4. The library book selection committee can rely on certain standard resources for book selection as:

   Children's Catalog, New York, H. W. Wilson Co., 950 University Avenue, 1961.
   Basic Book Collection for Elementary Grades, Illinois, The American Library Association, Chicago, 1960.

   They can also rely on professional magazines such as:

   The School Library Journal, R. R. Bowker Co., 1180 Avenue of the Americas, N. Y., N. Y. 10036.
   The Horn Book, Horn Book, Inc. 585 Boylston St., Boston.
   Bulletin of the Center for Children's Books, Chicago Press, 5750 Ellis Avenue, Chicago, Ill.
5. The average number of volumes per pupil in a centralized library should meet the American Library Association standard of ten books per pupil as soon as possible.
6. A balanced distribution between fiction and non-fiction should be maintained. Generally speaking, no more than 40 per cent of the books should be fiction.
7. Reference materials which should be available in a centralized library include encyclopedias, current atlases, an unbridged dictionary, the latest edition of the world almanac, and other appropriate references.
8. The Readers' Guide to Periodical Literature should be available for teacher and pupil use.
9. At least ten subscriptions to periodicals covering various areas of interest are recommended for an elementary school library.
10. The following books on library services are essential guides in library organization and operation:

    Akers, Susan Grey, *Simple Library Cataloging,* American Library Association, latest edition.
    American Library Association, *Standards for School Library Programs,* latest edition.
    Douglas, Mary Peacock, *The Teacher-Librarian's Handbook,* American Library Association, latest edition.
    Library Research Service, *School Library Routine Visualized,* Demco Library Supplies, 116 S. Carroll St., Madison 3, Wisconsin
    Wofford, Azile, *The School Library at Work,* The H. W. Wilson Co., latest edition.

Individual Classroom Collections

For schools providing individual classroom collections, the following guidelines are recommended:

- Each classroom collection should aim for ten books per pupil, with 40 percent fiction and 60 percent non-fiction.
- A set of encyclopedia should be provided with each classroom collection.
- The individual classroom collections should provide for a wide variety of reading levels within the room.
- Each classroom collection should be available to all classrooms in the school through a system of interchange.
- There should be some simple form of card cataloging.
- Teachers should meet together and plan the selection of books to be purchased.
- The local school budget should provide funds to purchase books for the classroom collection.

Audio-Visual Collection

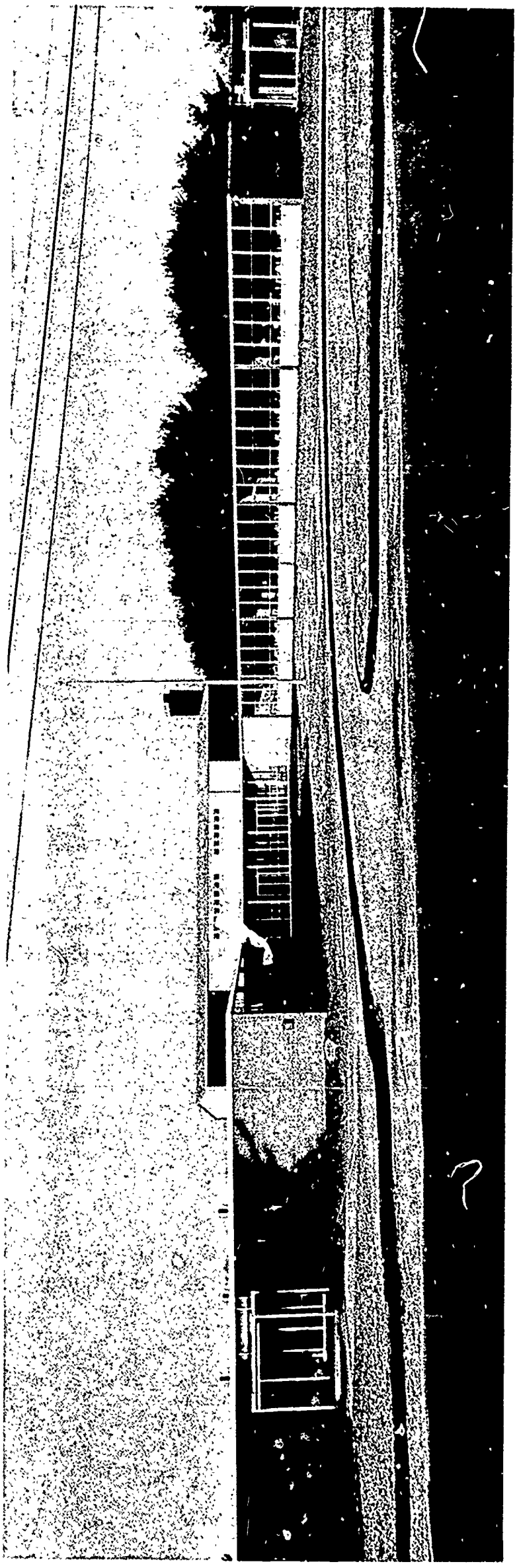
- The audio-visual center should be a part of the elementary school library organization and housed in a separate room near the library or in a part of the library itself.
- The audio-visual center should include films, filmstrips, disc recordings, tape recordings, pictures, slides, maps, globes, transparencies.
- The audio-visual center should be under the supervision of the elementary school library and appropriate library procedures should be used for filing and distribution.
- The annual budget for the acquisition of audio-visual materials, exclusive of equipment, should not be less than one percent of the total pupil instructional cost.
- New audio-visual materials should be selected through a cooperative effort of the faculty and the person responsible for audio-visual education.

Library Quarters

- Library quarters should include space for all types of library use, including recreational reading, research, small group activities and class use.
- The size of the library quarters should be determined by the formula (10 percent of enrollment times 35 sq. ft.). An additional 200 square feet is recommended for the processing, care, and repair of books and other library materials. However, the library should be at least the size of a regular classroom.
- Library quarters should provide adequate shelving and storage space for all types of materials.
- Appropriate bulletin board display areas should be available.

Expenditures

- For starting a library, the initial expenditure should range as follows:
  Schools with enrollment less than 200: $500 to $1,000
  Schools with enrollment of 200 to 600: $1,000 to $2,500
  Schools with more than 600 pupils: a minimum of $2,500
- The school budget should reflect an annual maintenance figure of not less than $4.00 per pupil for purchase of current library books and materials.



Guidelines and Recommendations for
The
Elementary School Plant

The Modern School Facility and The Balanced School Program

ELEMENTARY SCHOOL PLANT

Philosophy

School facilities must be provided to meet the needs of the educational program established for the students it will serve. The educational program determines the nature of the school plant and, as the buildings are designed, attention must be given to the following:

- Flexibility — Modern technology and the wide choice of versatile construction materials make it possible to provide buildings with great flexibility simply and inexpensively. Buildings should be adjustable to future changes in the curriculum and teaching methods.
- Expandability — Most schools have to be expanded as the enrollments increase. Buildings should be designed for future additions and expandability without destroying the original design or the functional areas.
- Durability — Low cost construction may result in high maintenance and repair cost. Buildings should be made of durable materials with low maintenance requirements.
- Accessibility — Buildings should be designed for an easy flow of students and parents both inside and outside of the school.

Site

It is the responsibility of the local school board to plan for an elementary school site several years in advance of the need. Careful studies should be made of population trends; industrial, commercial, and residential developments; and other factors indicating when and where new school sites will be required.

A school site is not simply a parcel of land upon which a school building can be constructed. It is a functional part of the school plant with educational purposes. This site needs to provide space for outdoor equipment, circle games, running and chasing, and hard-surface areas. Physical education areas should also be provided for activities such as volleyball, handball, touch football, softball, and possibly soccer. Separate areas need to be provided for the kindergarten children and for nature study and conservation. A portion of the site will be used for approaches, grounds, and parking. It is also suggested that provisions be made for community use of the same site for recreational purposes.

The selection and acquisition of a site for an elementary school should take into consideration accessibility, size and shape, environment and service, topography, climate, and other details in the development of the site.

It is suggested that elementary school sites include a minimum of five acres plus an additional acre for each 100 pupils of projected maximum enrollment.

Health Factors

The health of the students is a major concern of people planning school buildings. One of the important contributing factors in the health of school children is the problem of visual comfort and efficiency. The complexity and inter-relationship of many factors in the effects of the lighting system make it essential for the architect to work with a lighting engineer to design the total visual environment.

Other health considerations are the provision of adequate safe water and sewage disposal approved by the State Department of Health. Before making any final selection of a site and purchasing the land, advice should be obtained regarding water supply and sewage disposal.

Adequate heating and ventilation facilities also must be provided.

Safety Factors

The greatest danger is fire. A building must provide safe and easily accessible exits from all parts of the building and provide dependable detection devices and emergency fire fighting equipment. The New Hampshire State Board of Fire Control should be consulted on safety provisions.

Regular Classrooms

The regular classroom accommodating 25 pupils should provide a minimum of 900 square feet.

The nature of the program of instruction should determine the design of the classroom. Generally, chalkboards and tackboards should be located on at least two different walls and be adjustable in height to provide use by both the teacher and the pupils. Flexibility should be the key factor in designing the interior of the room and in selecting the equipment. Toilets may be provided within the classrooms at the primary level, but it is recommended that central toilets be provided for the middle and upper elementary school students. Each room should be provided with a sink, bubbler, bookshelves. ample storage space, and work counters. The room should be bright and conducive to the educational program for which it is designed.

The advent of television, audio-visual materials, the ungraded school, and team teaching may necessitate special consideration in designing the general classroom. Under normal circumstances the elementary school should not exceed 24 basic classrooms, with the supporting areas. A new school on a new site should be considered when this size is reached.

Kindergarten Rooms

The kindergarten classroom should be larger and brighter than the regular classroom. A room designed to accommodate 20 kindergarten youngsters should be 1,000 square feet in size. The furniture should be movable to facilitate flexibility of arrangement and furniture used by the students should be appropriate to their size. The chalkboards and tackboards should also be adjustable in height. The room should be located away from the middle of the school and have a direct exit to the kindergarten play area. Toilet, sink facilities and cloakroom space should be located within the classroom.

Library

Provisions should be made for a centralized library within the modern elementary school. Refer to the section on libraries.

Administrative Suite

The administrative suite should be located near the main entrance of the building and also as near as possible to the center of the school. Facilities should be provided for the principal, secretarial staff, guidance services, health room, and teachers' lounge and workroom. As the school becomes larger in size, each of these services should be located in a room specially designed for it.

Multi-Purpose Rooms

This facility should be located so as to be easily accessible to most of the classrooms, and at the same time, be a little isolated due to the noise factor.

The size and shape of the room depends on the purposes it is meant to serve. The minimum size gymnasium floor for an elementary school is 36' x 52'. As the size of the school increases, consideration should be given to providing a gymnasium separate from the cafeteria, and even providing for a little theater. The area should be separable from the rest of the building in order to permit public use without opening the entire school. Public toilets should be provided.

Cafeteria and Kitchen Area

The cafeteria and kitchen units should be centrally located with the service entrance located so that delivery trucks would not have to cross the play area. Ample storage and meal preparation areas should be provided in the kitchen. Consideration should be given to using the cafeteria area for other functions during the after-school hours.

The Recommended Elementary School

The Elementary School We Need in New Hampshire[1]

The New Hampshire Elementary School:

- should have clearly stated purposes that represent its commitment to children, to knowledge, and to society;
- should have a responsibility beyond the teaching of the "basic skills;"
- should reflect a concern for self-concept and personality development of children;
- should provide opportunities for children to practice and to learn the skills of effective group living as a part of their learning experiences;
- should demonstrate its respect for the individual;
- should foster creativity in children;
- should recognize and must make provision for meeting the individual differences among children;
- should relate the learning experiences of children to their world and to reality as they know it;
- should provide opportunities for children to share in planning and organizing their classroom activities;
- should view evaluation as a continuing activity, that is, an integral part of learning rather than an aftermath;
- should be responsive to children's needs that arise from conditions peculiar to the home, the community and the neighborhood;
- should be free to develop the specifics of its instructional progress;
- should use the time of children and staff in ways that are consistent with the purposes of its instructional program;
- should be of reasonable size and must maintain classroom units that foster optimum learning opportunities;
- should purposely place each child in a setting that best promotes his learning;
- should be attentive to the problems created by transitions from grade to grade, and school to school;
- should effectively utilize the strengths of its staff;
- should extend beyond the four walls of the classroom and beyond the physical limits of the school building;
- should have superior leadership;
- should have a competent staff;
- should assume a leadership role in the community.

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[1] *The Elementary School We Need,* Association for Supervision and Curriculum Development, 1965.